SIDE-EFFECTS OF GRANULATED INSECTICIDES IN CANTERBURY

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Summary

Deaths of a number of species of birds were recorded following the application of phorate, parathion and fensulfothion for the control of cereal aphids (*Rhopalosiphum padi*) and grass grubs (*Costelytra zealandica*) in Canterbury.

PHORATE APPLICATIONS 1968

ON June 21, 1968, an inspection was made of applications of a clay prill containing 10% phorate, spread at the rate of 10 lb per acre by Air Work Ltd. using a new spreader. The purpose was to control cereal aphids (*Rhopalosiphum padi*).

Later, the prills were spread by air and from the ground over a large area until well into September; and in 25 of the crops inspected there were no cereal aphids.

On June 21 a visit was made to G. W. Telford's property at Loburn where there were two dead magpies; at D. G. Robinson's property there were two more. On June 26 at "Wandlehome", Waiau, there was one magpie in a coma that died, and one at a later date. At H. Croft & Sons' property in the same area, visited on July 2, 4, and 6, was a total of 14 dead magpies, two red-billed gulls, one greenfinch, one dead mouse, and some very sick black-back gulls on the treated paddock needed to be destroyed. There was a light, steady breeze blowing on this day, and the birds were only just able to clear the fence; one crashed two paddocks away but was able to get air-borne before it could be reached. All early paddocks had had heavy rain, and there were many dead worms on the surface.

On September 12 at Racecourse Hill six dead magpies were picked up and one other at the same roosting site on September 14. On August 19 there were two dead magpies at the Mulholland estate, and Mr Mulholland advised that there was more fighting amongst the magpies than he had ever seen and that they were killing one another. This is a characteristic of birds of this Order when one of their number is sick.

PARATHION APPLICATIONS 1969

On April 18, 1969, Mr Russell of Carew laid parathion (all rates in active ingredient per acre). 1.7 in. of rain fell, mostly on April 21. Fifty gulls and one magpie were picked up, fifteen gulls on April 26 and one magpie on the 27th. On April 29, 51 more gulls — red-bills and black-backs — were picked up and eight magpies were found in pine trees close to the treated area.

At McEvedey's and Allan's properties, Rakaia Huts, parathion granules were spread at the rate of 2.5 lb over three paddocks totalling 70 acres. One paddock was watered as soon as application was finished, and at

3.30 p.m. it started to rain, and rained all night. On the 19th four dead red-billed gulls, and one dead black-back were found on the 16-acre paddock; and there were two sick red-bills and nine sick black-backs in an adjacent paddock. By April 26 nine dead red-bills and one black-back had been picked up.

On May 2 six black-back gulls and four red-bill gulls were dead at Allan's, and one month later there were two freshly killed black-backs on the same property.

On April 30 at a paddock at Robson's, Carew, six more dead black-backs were found.

On May 12 several areas at Carew that had been treated with 2.7 lb were visited, and six dead red-bill gulls and two black-bill gulls found; and there were two sick black-back gulls on R. A. N. Penny's property. J. McCully reported 12 dead gulls on J. McKenzie & Son's property, and approximately a sack of dead gulls, mixed species, were picked up on a trial made by E. A. Upritchard on James's property, Carew.

A paddock treated with parathion at the same Mr Russell's property that had the other kills, was reported with 10 farmyard ducks killed three weeks after it had been treated.

On April 8 several paddocks in the Hinds-Arundel area were visited:

A. Butler had treated eight acres at 3 lb. The paddock was in young turnips, and two dead gulls were found in the next paddock. At another paddock of 60 acres on R. Johnston's property were three dead blackbirds, 12 dead magpies, and the remains of five dead passeris. The farmer reported picking up a few dead gulls before we inspected the area.

K. Peterson of Carew reported picking up 30 magpies on about 25 acres which had been treated with parathion and there were four dead red-bill gulls and 18 dead magpies on the day of our visit.

Mr McKenzie treated a young grass crop of 16 acres, and there were nine dead red-bill gulls in the next paddock when the area was visited on the 8th.

On June 12, 1969, there were 64 dead gulls on a treated paddock at Mr Dixon-Reeve's property, and 13 dead magpies at A. C. Wright's. There was one dead blackbird in each paddock.

FENSULFOTHION APPLICATIONS 1970

On April 2, 1970, a call was made on A. Martin in the Carew area, who had treated a paddock with fensulfothion at 2 lb. There were 12 dead black-back gulls and two dead magpies, and Mr Martin said there were many sick birds that managed to fly away. R. Bush said he had a small fensulfothion trial, but mainly the paddock (about 15 acres) had been treated with diazinon, using a wet mix through a 21 ft boom. He said there were a few birds affected. One dead black-back gull was found. However, in a paddock close by on Peterson's property, were four dead black-back gulls and one dead magpie, and he stated that more birds than this had died when they flew over from the Bush's. Mr Peterson had used diazinon on the paddock and said some sick birds had flown away.

P. W. Boag of Lauriston had 33 acres spread with fensulfothion at 2 lb on April 9, 1970. Mr Boag and his farm worker picked up over 100 mixed gulls, blackbirds, and hawks after the poison had been laid. On about the ninth day after application, they had to drive some sheep over the paddock, and the next morning about 30 more birds were picked up. On my visit to the area after first hearing of the incident, there were 11

dead magpies, one dead thrush, and one dead black-back gull scattered over the two paddocks. Mr Boag and his worker picked up hawks approximately 800 yd from the treated paddock, and a paddock that is corner to corner with the treated area has a good crop of turnips, and has never been searched.

D. Barton of Carew had 52 acres treated with fensulfothion at 2 lb on April 6. The next morning 32 gulls — black-back and black-bill — were picked up. There were five dead magpies in a nearby pine stand. Later, there were four more dead magpies, five black-backs, and seven dead hawks. Three of these were beside a hedgehog carcass. In contrast to the paddock at Boag's which had been heavily grazed and showed quite an area of bare earth, the two paddocks at Barton's were covered with a good sole of grass.

On a farm owned by D. R. Langley of Rakaia that had had 41 acres treated with the fensulfothion prill four dead hawks were found close to a hedgehog carcass in a paddock 200 yd from the treated area; as with the hedgehog at Barton's, it had been eaten except for the skin and quills. In both instances there were traces of blue-green dye on the quills.

A farm advisory officer visited this area and counted dead birds with a neighbouring farmer, and the farm hand. The owner was on holiday. They estimate up to 400 dead birds in the area.

A. C. Aymes of Ashburton had 5 acres treated with the fensulfothion product, and picked up 15 dead magpies, five dead hawks, and one dead thrush.

From these notes, it is evident that the parathion and fensulfothion products can claim large numbers of birds. Gulls — black-back, black-bill and red-bill — are a familiar part of the farm scene in Canterbury and over the year must assist in natural control of pasture pests. Because of their flocking habit and the fact that they seldom roost on the farm areas, there is probably a larger kill than of those birds that are actually picked up at the site of application. Smaller birds — blackbirds, thrushes and finches — usually die in cover and, once again, deaths must be more than the actual number found.

Any discussion on the merits of different chemicals or the use of dye has been deliberately omitted, and only areas of which I have some personal knowledge have been quoted, even though there have been many other kills reported that I have not been able to inspect.