

Hydatids traceback

The campaign to eradicate hydatids began about 22 years ago, and although there has been success in some areas there are still parts of New Zealand where there is cause for concern. Although most districts report good progress against *Echinococcus granulosus*, the lack of progress against *Cysticercus ovis*, if continued, might render our lamb unsuitable for some export markets.

Setting up a traceback scheme

In 1978 the National Hydatids Council (NHC) decided to aim to establish a traceback system to identify consignors (properties) supplying freezing works with infected sheep.

Last year representatives of NHC, Meat Division of the Ministry of Agriculture and Fisheries, and of the Freezing Companies Association met and agreed upon a system whereby NHC was supplied with the identity of consignors of affected stock.

The traceback system went into effect at the beginning of this killing season. At present it applies nationwide to *E. granulosus* infection, and usually to *C. ovis* infection as well. In Otago and Southland a traceback pilot scheme for cysticercosis is running concurrently with the national scheme.

E. granulosus traceback

The Meat Division have agreed to ticket any sheep infected with hydatids as they do with other diseases. The freezing works provide information about the line, incidence, and consignor, usually on a computer printout sent to NHC.

If a line of sheep is affected, NHC, through the field advisory officers (hydatids) in the six Animal Health Division (AHD) regions, notifies the hydatids control officers of the local body having jurisdiction over the area from which the sheep came. An hydatids control officer then visits the property to try to establish the cause of the infection.

Infection could be caused by one or several of the following: untreated dogs, poor feeding techniques, poor or absent home killing facilities, inadequate dog control, visiting dogs, etc.

With true hydatids (*E. granulosus*) there will be cases where no useful information is gained, as old ewes may have passed through many hands before finally being slaughtered. They may have become infected many years previously on unknown properties.

Provision is made for AHD livestock officers and veterinary officers to help hydatids control officers if necessary. Each AHD district will maintain a card index of properties investigated.

C. ovis traceback

Although the emphasis of traceback is on true hydatids, NHC has asked for the identity of any lines of sheep infected with *C. ovis*, and most freezing works give the information. When time allows, *C. ovis* infections are traced back.

Now that there is an efficient drench effective against the intermediate stages of *C. ovis* and *C. hydatigena*, there is hope that it may be economical to drench "at risk" sheep. Only small numbers could be drenched because the drench is too costly for widespread use. Through traceback it should be possible to pinpoint farms where repeated breakdowns occur.

Cysticercosis traceback in Dunedin Region

Although *E. granulosus* is well under control in the Dunedin Region, recent figures released by NHC show that *Taenia ovis* is not. In fact, last season about half the farms in the region sent lambs infected with *C. ovis* to slaughter. As the infections were not uniformly distributed throughout the region, they probably result from various dogs not receiving regular treatment.

It is hoped that properties sending infected lambs for slaughter can be identified by the following method and then become the targets of an educational programme.

The freezing works in the region will send printouts of each week's infected lines directly to a Regional Surveillance Centre set up in Dunedin office. The Regional Veterinary Officer will notify livestock officers of sheep infected in their areas.

Each livestock officer will then consult with the local hydatids control officer on the history of hydatids on any property affected and on adjacent properties. Together the officers will inspect the affected property for defects pertaining to feeding or housing dogs, to killing facilities, or to treating and testing dogs.

Their findings will be returned to the field advisory officer (hydatids), to the regional office, and to the surveillance centre where the final records are kept. The centre, in association, with Mr M.A. Gemmell and his Hydatid Research Unit, will work out new control measures.

By monitoring the incidence rates of *C. ovis* in lambs and relating them to the time of the

year, it is sometimes possible to establish if an infection is due to a dog visiting, or even to one living up to 10 km from the farm.

It is also possible to distinguish "winter" storms of *C. ovis* when cystic infections are sporadic, and "summer" storms when the infections are heavy. The winter storms are due to a dog depositing eggs on or near the farm some time before a lambing season. Whereas, in the epidemic-type summer storm, eggs are deposited after the lambs have begun grazing, when it is too late for them to develop immunity. As a result their flesh may contain massive concentrations of cysts. The Dunedin Region hopes to be able to measure the incidence of winter and summer storms and devise control measures.