

What has happened to 'sheep measles'?

by Bruce Simpson, Consultant, Ovis Management Ltd

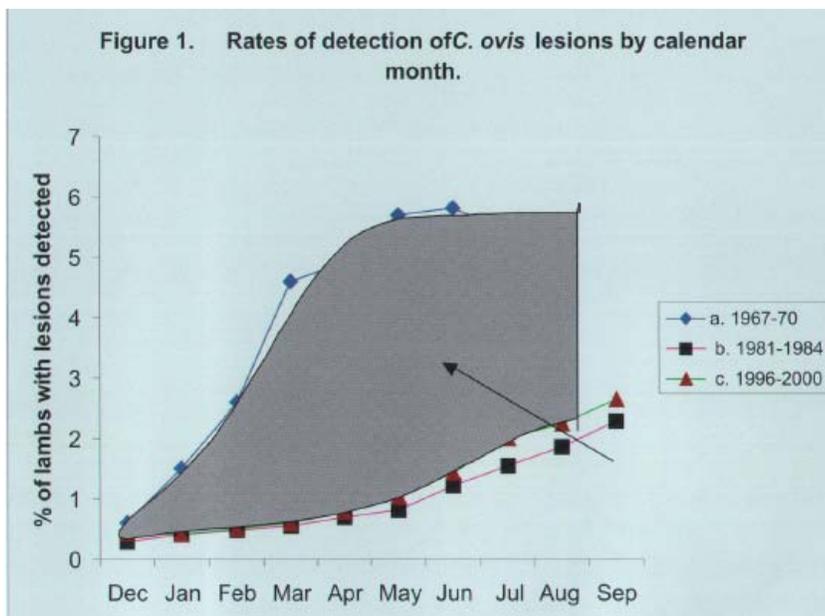
Continuation of sound dog feeding practices, strengthening of controls on dogs visiting sheep farms and treatment of dogs with anthelmintics effective against Taenia ovis are all contributing to the ongoing control of this parasite, which has the potential to cause serious damage to the sheep meat industry.

Most of the benefits obtained through the period of regulatory control from 1970 to the early 1990s are being maintained. Veterinary practitioners are encouraged to continue their contribution to control by providing professional advice to sheep farmers and dog owners.

From the early 1970s until 1996, *T ovis* was subject to regulatory controls. Their impact decreased from around 1993 when the passage of the Biosecurity Act gave notice of the demise of the Hydatids Act, which had formed the basis for the regulatory programme. That programme went through various phases but for most of its duration relied on:

- treatment of sheep meat fed to dogs (generally freezing),
- control of dogs and/or removal of dead sheep to prevent access to carcasses,
- dosing of dogs with anthelmintics every six weeks to remove inadvertent infections.

Following the removal of regulatory control for *T ovis* in the early to mid-1990s there were concerns that the prevalence of *C ovis* (sheep measles) lesions could return to the high levels of the late 1960s. The meat industry was concerned that, if farmers became careless about control measures, sheep measles could again become a serious meat quality issue. Ovis Management Ltd (which is owned by the Meat Industry Association) was charged with encouraging farmers to continue using control measures and with monitoring the prevalence of sheep measles in slaughtered stock.



Ovis Management Ltd

Ovis Management Ltd has maintained a presence at field days and agricultural shows and published promotional material directed at encouraging farmers to continue the control practices that were previously mandated by law. The company has also maintained a programme of visiting veterinary practices servicing the sheep industry to enlist the veterinary profession's help in advising farmers of practices that reduce the risks of infection.

The database of lambs slaughtered from individual properties and the prevalence of sheep measles in their carcasses is used both to monitor trends in infection rates and to identify properties with heavy infection. Notices are sent to these properties advising them of their status and encouraging improved control efforts. Farmers requiring professional assistance are referred to their local veterinary practice.

Control measures

Surveys of farmer attitudes and practices indicated that high standards of compliance with good control practices continue. Some of the factors that are assisting in the ongoing control of sheep measles are:

- freezing of sheep meat (or cooking of offal) before it is fed to dogs,
- increasing use of commercially prepared dog foods,
- increased controls being exercised on dogs visiting sheep farming properties,
- use of anthelmintics containing praziquantel to remove infections from dogs at varying intervals.

Although levels of compliance remain high there are indications of some slippage. Some farmers only treat sheep meat intended for dog tucker 'some of the time'. Some who use anthelmintics as a significant part of their control programme treat their dogs at extended intervals. Others

exercise no control over dogs visiting their properties.

Changes in prevalence of detection

Figure 1 shows averaged rates of detection of *C ovis* lesions in slaughtered lambs for each calendar month:

- during the period prior to regulatory control (1967 to 1970),
- over the period 1981 to 1984 in the middle of the regulatory control programme,
- from 1996 to 2000 in a non-regulated environment.

The greater proportion of gains made during the period of regulatory control of sheep measles have been retained through the period of voluntary control measures up until 2000. Data since that time indicate that the benefits are continuing but there are some signs of increasing prevalence.

Discussion

Taenia ovis is regarded by the meat industry as a significant cause of quality defects in sheep meat and the industry is concerned that, as time passes and ownership of farms changes, the lessons learned during the period of regulatory control could be forgotten. *Taenia ovis* is a parasite with high fecundity and reliance on single methods of control can result in failure. Veterinarians are now the main source of information for farmers on the control of sheep measles. Listed below are some comments on control methods.

- The prepatent period (time from infection until the parasite is producing viable eggs) for *T ovis* can be less than six weeks. If farmers are placing significant reliance on anthelmintics as a control measure dosing should be every four weeks. Having an infected dog on the property for two weeks could result in heavy infections.
- Freezing of sheep meat is an

effective means of ensuring it is safe. Freezing must be complete and it is recommended to freeze sheep meat for at least seven days. Freezers used for dog tucker should be checked periodically to ensure they are operating at a temperature below -10°C.

- Infected visiting dogs can undo excellent control of *T ovis* in dogs resident on the property. Farmers should exercise control over visiting dogs. This can take many forms, such as requiring dogs to be kept in motor vehicles, requiring the production of certificates of treatment, denial of access or, in extreme cases, destruction of dogs.
- Dogs owned by people other than

sheep farmers present threats. Ensuring that all dog owners are aware of responsibilities to farmers whose properties they might visit or pass by will be of assistance. Ensuring that they recognise that uncooked sheep meat is not a suitable food for dogs will also help. Treatment of dogs and obtaining a treatment certificate before venturing into farming areas will help ensure a welcome.

Ovis Management Ltd, and the meat industry, appreciate the contribution that veterinary practitioners are making to the ongoing control of sheep measles and encourage enhancement of that role. ■

Inserted from the November 2002 issue:

Correction

The graph on page 20 in the October 2002 *Vetscript* was missing explanatory details. This is how it should have looked. Apologies to author Bruce Simpson and to readers.

