

Prevention the key to combating lungworm in Wapiti

Reds more resistant, says researcher

by Hugh de Lacy

AN OUNCE of prevention is worth a pound of cure when it comes to controlling lungworm in Wapiti, Invermay AgResearch scientist Ken Waldrup told the Wapiti Society at its field day in November.

Waldrup said that while oral white drenches work well at killing lungworm in Red deer, they work less well for hybrids, and barely at all for pure Wapiti.

The well-patronised day at John Barber's Oxford farm attracted 150 farmers and industry identities from around the South Island.

Waldrup, who has been studying the effects of parasitism in deer, is still analysing samples to find out why there is a different response between types.

But he said the underlying message so far is that prevention is the only cure.

He said Invermay had successfully used a heavy programme of pour-on Cydectin with Wapiti hybrids. Cydectin's active ingredient is moxidectin, which is related to ivermectin.

Waldrup stressed that while the programme had worked well, it had been run for scientific rather than commercial purposes. More work is needed to determine the best treatment interval for farm use.

He further stressed that a parasite control programme for commercial Wapiti-type animals must stay ahead of problems rather than treating them once they began to restrict production.

He cited a successful experiment by Elk City farmer and breeder David Tipple. He had used an initial dose of Cydectin on his Elk weaners, coupled with long-acting boluses (capsules) of Extender 100.

The boluses contain a white drench (albendazole). While it does not prevent infection, its use did prevent some of the adverse effects of parasitism for the life of the bolus — up to 119 days.

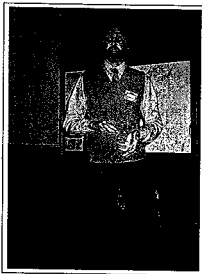
The bolus does not apparently kill dormant larval worms in the deer's stomach, and it may be useful to treat again with an effective drench such as Cydectin after the life of the bolus is up.

"The take-home message is that if you're going to use Wapiti as a terminal sire, then you've got to protect the progeny from parasites to gain the best production," said Waldrup.

"And protection is the operative word."

Another featured speaker, Dr Frank Griffin of the Otago University Deer Research Laboratory, described the facility's initial studies to produce a blood test for deer. This aimed to prevent slaughter of deer that reacted false positive to the standard skin test.

While the complete — and expensive — blood test is necessary for the salvage of non-infected animals, Griffin and his co-workers found that the less expensive antibody component (ELISA) of the test can be used to screen infected herds for diseased animals that do not react to the skin test.



Ken Waldrup

Post-mortem studies on thousands of deer show that not only could the blood test save non-infected animals and identify *Micobacterium bovis* in infected animals for slaughter, but that a proportion of animals exposed to *M. bovis* appear to develop protective immunity after clearing infection.

This has led to studies to evaluate vaccines for generating artificial protection.

The laboratory's vaccine work over the last six years has shown that live vaccines can generate an immune response which is protective ("good" immunity), and can be distinguished from the other type of immunity ("bad") which is found in infected or diseased animals and is used to diagnose disease.

As part of the vaccination programme it was necessary to develop a model to artificially infect deer with *M. bovis* so that protection produced by vaccines could be tested.

This work has been carried out on a quarantine farm near Milton, Otago, in collaboration with Dr Colin Mackintosh of AgResearch Invermay.

As well, it has allowed researchers to study the way genetics affect resistance of deer to Tb, and the way stress increases susceptibility to infection.

By culling highly susceptible animals and introducing management systems to maximise the animals' resistance, the threat of Tb in deer herds could be significantly reduced, if not eliminated.

In the meantime: "It is essential that all deer farmers continue an aggressive programme of Tb herd testing to guarantee that they have a future in deer farming," Dr Griffin said.

A panel of other speakers at the field day, examining the development of the Wapiti velvet market, found a deficiency in the grading system in that the circumference for both Wapiti Supreme and Wapiti One is 20 cm.

This compromises the credibility of, and the returns for, the Supreme grade.

The consensus of opinion at the field day was that the Wapiti One circumference should be cut back to 18 cm.

Traders and processors agreed that more buyers were beginning to recognise Wapiti velvet as a distinct product line.

The Oxford Wapiti field day was the latest in a series that have included farms in the Te Anau Basin, Southland, and Patearoa, on Otago's Maniopo Plains. □