

The use of anthelmintics to control nematodiasis in farmed deer (*Cervidae*)

K.A. Waldrup, C.G. Mackintosh, M.J. Taylor¹ and R.E. Labes

AgResearch, Invermay Agricultural Centre, Private Bag 50034, Mosgiel, New Zealand

and ¹MAF Quality Management, Invermay Animal Health Laboratory, Private Bag 50034, Mosgiel, New Zealand

Recent research into anthelmintic compounds for farmed deer in New Zealand has encompassed both previously licensed products for deer and experimental formulations designed for other species. Trials with Albendazole oral drench have shown that it is effective in red deer (*Cervus elaphus*) using a dose rate of 10 mg/kg. This dose rate was not effective in wapiti (*Cervus elaphus*). The use of Albendazole in weaner red deer in a sustained-release intra-ruminal bolus resulted in no faecal larval shedding of lungworm for 14 to 112 days post-treatment, an increased rate of

liveweight gain for treated animals for 90 days post-treatment, but greater numbers of inhibited *Ostertagia*-type larvae in the abomasum. Moxidectin is not used in deer as a drench but was used experimentally in wapiti and wapiti hybrid deer as a sustained-release intra-ruminal bolus. This treatment reduced the incidence of death and parasite-associated ill-thrift in 2-year-old stags over the autumn and winter from 33% in untreated stags to 0% in treated stags. The results of research using Ivermectin and Moxidectin are shown in Table 1.

Table 1. A summation of experimental results using Ivermectin and Moxidectin as anthelmintics in farmed deer.

Drug	Formulation	Dose Rate	Type of Deer	Effectiveness [†]
Ivermectin	oral	200µg/kg	red deer	100% against LW
		200µg/kg	red deer	100% against LW, 99% against AAW, 84% against AL
	pour-on	400µg/kg	red deer	100% against LW, 100% against AAW, 96% against AL
			red deer X wapiti hybrid deer	100% against LW, 100% against AAW, 51% against AL
		500µg/kg	red deer	100% against LW, 100% against AAW, 99% against AL
			red deer X wapiti hybrid deer	99.75% against LW, 100% against AAW, 99% against AL

[†]LW - Lungworm (*Dictyocaulus viviparus*), AAW - Adult Abomasal Worms (primarily ostertagiid species)
AL - Abomasal Larvae (4th stage ostertagiid larvae)