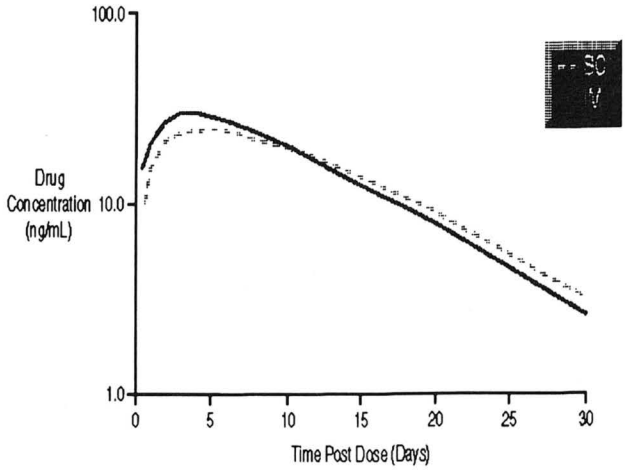
bioavailable with either route and no reaction would be expected at the injection site.



Source: Nowakowski et al, 1995. Journal of Veterinary Pharmacology and Therapeutics, In Press

Figure 3. Mean Concentration of Doramectin in Bovine Plasma After Intramuscular (IM) or Subcutaneous (SC) Administration of a Single Dose of 200 µg/kg

With the successful completion of the early discovery program and the formulation development, world wide trial programs of therapeutic and protective efficacy have been conducted in at least 20 countries with over a total of 1,000 trials. An example of laboratory protection from reinfection data can be seen on Table 1 with 3 important nematode species. Protection periods of 21 to 42 days with both internal and external parasites under artificial challenge conditions allow for the development of parasite control programs with minimum treatment frequencies.

Table 1. Duration of Persistent Efficacy of Doramectin Against Nematode infections of Cattle

Post-treatment Challenge period (Days)	Percentage Reduction in Worm Burden (Doramectin vs Control)		
	Ostertagia. ostertagi	*Cooperia oncophora*	*Dictyocaulus viviparus*
14	99.9	99.2	-
21	99.9	90.7	100
28	93.7	-	99.9

Source: Weatherley et al, 1993. Veterinary Parasitology 49: 45-50

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Equivalent Persistent Efficacy of Ivermectin, Abamectin, Doramectin and Moxidectin in Cattle

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As one of the major goals in strategic parasite control is to minimize the level of pasture contamination, post treatment fecal egg count (FEC) reduction provides a good indicator of the relative utility of antiparasitic compounds under field conditions. A series of 8 studies, involving more than 500 cattle, was undertaken over a two year period in Latin America, Ireland and South Africa to compare the efficacy of commercial endectocides in maintaining reduced FECs in cattle grazing naturally infested pastures. Within each study, cattle of similar breed and age were ranked and blocked on the basis of either pre-treatment FECs or body weights and randomly allocated among treatment groups. One group was untreated (in the trial in Ireland, the control group was treated with oxfendazole) while each of the others was allocated to treatment with ivermectin, moxidectin, doramectin or abamectin. All treatments were administered according to label recommendations to provide a minimum dose of 200 mcg/kg. In each trial, all groups shared the same pasture. Fecal samples were collected at approximately weekly intervals between weeks 3 and 9 post treatment and processed to determine the number of nematode eggs. Eggs tended to appear earliest in moxidectin-treated groups, and from week 5 eggs generally appeared at a low but increasing rate in feces of all medicated groups. In the South American and South African trials there was no significant difference in FECs among the treated groups at weeks 6, 7, 8 and 9, but counts in treated groups were significantly less ($p<0.05$) than those in the untreated controls. In the trial in Ireland, only the ivermectin-treated group showed significantly reduced fecal egg counts, relative to the moxidectin-treated group. Based on larval differentiation, challenge in all studies was predominantly *Cooperia*, with substantial proportions of *Ostertagia* present and some *Haemonchus*. The results of these studies demonstrate that on the basis of fecal egg count reductions under varied conditions of natural challenge on three continents, there is no functional difference in the persistent activity of subcutaneously administered ivermectin, doramectin, moxidectin or abamectin against gastrointestinal parasites of cattle.