

POSTER PRESENTATION

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Gastrointestinal helminths and lungworms in suckler cow beef herds in Southern Finland, a pilot study

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Introduction

The number of suckler cow beef herds is increasing in Finland. Prevalence studies about gastrointestinal parasites and lungworms of grazing beef cattle in southern Finland are not available. Systematic anthelmintic treatment is not widely used and there is no recommended treatment protocol available. The aim of this study was to obtain basic knowledge of the prevalence of gastrointestinal parasites and lungworms in grazing suckler cow beef herds in southern Finland.

Materials and methods

The study was conducted in summer 2002. It included 13 voluntary beef cattle herds (herd size 26 – 95 adult animals) in southern Finland. None of the herds had clinical symptoms of parasitic infection. None of the herds was treated in the spring and 11 of the herds had not used anthelmintic treatments within a year. The first set of faecal samples were taken from 4-10 calves on 10 farms, 4-10 heifers on 7 farms and 8-12 cows on 13 farms. The first sampling was done more than 3 weeks after the beginning of the grazing period and the second sampling was done at the end of the grazing period in autumn. Faecal samples were investigated at Finnish Food Safety Authority Evira, Oulu. The methods used were modified McMaster for gastrointestinal helminth eggs and the Baermann technique for detecting *Dictyocaulus viviparus*. Egg count less than 50 eggs/gram faeces (epg) was considered low infection, 50-500 epg moderate infection and more than 500 epg heavy infection considering Trichostrongylidae spp.

Dictyocaulus viviparus infections were evaluated on herd level as negative or positive.

Results

Trichostrongylidae spp were found in all herds in all groups examined. The egg counts in individual calves varied from 0 to 1540 epg at the first and from 0 to 780 epg at the second sampling. Egg counts in heifers varied between 0 - 120 epg and 0 - 140 epg, in older cows between 0 - 360 epg and 0 - 200 epg, respectively. Only three individual samples had egg count higher than 500 epg. Median values for calves, heifers and cows are presented in Table 1.

Dictyocaulus viviparus was detected in two herds. Other than trichostrongylid gastrointestinal parasites (*Capillaria* sp., *Nematodirus* sp., *Moniezia* sp., *Paramphistomum* sp.) were detected in very few samples at low levels.

Discussion

Gastrointestinal parasites, mainly Trichostrongylidae spp., were found widely in beef cattle, but the parasite egg counts were low or moderate at all farms in all groups of animals. None of the herds had clinical signs of infection and did not seem to need regular anthelmintic treatment. However, summer 2002 was exceptionally dry and warm in southern Finland which may be one reason for low egg counts. Other gastrointestinal parasites (*Capillaria* sp., *Nematodirus* sp., *Moniezia* sp., *Paramphistomum* sp.) were rare and considered not important.

The most important finding of this study was some farms having a subclinical *Dictyocaulus viviparus* infection. In light of the low incidence of disease in Finland, subclinical infections are a risk in cattle trade and should be considered.

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Table 1 Median egg count values (epg) of Trichostrongylidae spp. in 13 beef cow herds

	calves in summer	calves in autumn	heifers in summer	heifers in autumn	cows in summer	cows in autumn
Farm 1	50	60	M	M	0	0
Farm 2	0	70	M	10	0	0
Farm 3	0	0	M	60	60	0
Farm 4	20	30	20	0	0	0
Farm 5	60	120	20	20	0	0
Farm 6	10	50	0	0	0	0
Farm 7	20	40	0	M	10	0
Farm 8 ¹	50	M	0	0	30	M
Farm 9	40	20	M	M	0	0
Farm 10	M ²	40	M	50	20	0
Farm 11	M	0	M	M	0	0
Farm 12 ¹	M	M	70	70	0	0
Farm 13	60	160	0	M	0	0

¹ *Dictyoacaulus viviparus* positive herd

² M = Information missing

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