**Preventive and alternative treatments** of helminth parasites in organic dairy goats

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PARASITE

in organic dairy goats

Introduction Organic dairy goat farmers in The Netherlands do not wish to use chemicical anthelmintics as preventative and curative therapeutics against helminth parasites. Regarding helminth parasites steps are taken in the direction of prevention and monitoring, and only when necessary curative treatment.

# Send in manure samples for analysis on helminth parasites in August or at the beginning of the dry period Take rectal samples of 10 – 15 individual goats (not from the Chemical anthelmintics registered for small ruminants\* and 3 dazole Panacur 2 Imidithiazoles L-Ripercol drench Levacide Levacol Wormboli Levamisol Endex 8,75% **3** Avermectines er lilbemycines (Macrocyclische Lactone Dectomax Doramectine

### Prevention by means of grassland management Don't put goats on the pasture before the end of May • Rotate pastures every 3 weeks in May and June, rotate every 2 weeks in July and September Don't use the same pasture within 12 weeks Don't put lambs on pastures where older goats or sheep have • REMEMBER: grass gut from pastures within 12 weeks after gra-

## Monitor helminth infections

**Prevention of infection due** 

Keep new animals in quarantine

to newly introduced animals

• Treat new animals with a chemical anthelmintic from group 2 or 3 • Monitor 14 days after treatment -> if clean; introduction in herd • Keep litter of quarantine stable separate -> don't use this as a

#### Treat goats in the dry period

zing can be infected!

• Treat animals with chemical anthelmintics only when necessary based on manure samples and larvae determination • To prevent resistance, don't treat 2-5% of the animals in the herd • Use a double doses for goats, BUT based on animal weight Alternate each year between chemical anthelmintics from group 2

system was developed in combination with a close monitoring to prevent helminth parasites in organic dairy goats (figure 1). This system worked very well in keeping the incidence of helminth infections in dairy goats at a low level.

An evasive grazing

Grasslandmanagement

However, recent data showed that some farms have problems with helminths in the early spring, especially with Haemonchus contortus, even though animals were treated when dried off and/or grazed on clean pastures (figure 2). These farms are characterised by a diverse and rich flora in their grasslands and the presence of wild deer.

It was investigated whether this infection was caused by infected litter in the stable or by means of fertilization with infected manure. Samples were taken from the litter in the stable and from the manure heap. None of the samples contained

\* no chemical anthelmintics are registered for lactating goats

ese recommendations are the result of the EU project Wormcops ntrol measures, other than grasslandmanage

**Figure 1**: Helminth parasite management tool

Paramaxin Additional to prevention by means of an evasive grazing system the use of Paramaxin, a mixture of several herbs (Richterpharma ag, Germany) in the prevention of helminth infection was investigated onfarm (table 1). The incidence of helminths in the Paramaxin treated animals, compared to the other groups, was lower after six weeks of treatment. However, infections could not be overcome completely with Paramaxin treatment.

infectious larvae. Infection through wild deer is still under investigation.



**Figure 2**: Life cycle of *Haemanochus* through the year

**Tabel 1**: On-farm experiment: a herd of 120 goats was divided over three treatment groups; chemical anthelmintics (N = 80), Paramaxin (N = 20) and a control group (N = 20)

Date	18-05-2011	08-06-2011	11-06-2011	18-06-2011	25-06-2011	07-07-2011	22-07-2011	01-09-2011
Sample	control 1	control 2	control 3	1 week after	2 weeks after	4 weeks after	6 weeks after	control 4
				treatment	treatment	treatment*	treatment*	
Pooled sample herd (N = 15)		2050						650
Group 1: chemical anthelmintic $(N = 15)$	<50		1350	150	<50	<50 – 350 (mean 80)	100 – 950 (mean 340)	
Group 2: chemical anthelmintic (N = 15)	<50		2100		<50			
Group 3: Paramaxin	<50		250		150	<50 - 1250	150 - 600	
(N = 15)						(mean 290)	(mean 300)	
Group 4: Control	200		900		250	<50 - 250	<50 - 1050	
(N = 15)						(mean 115)	(mean 375)	

\*Individual samples N = 10

The table gives an overview of Strongylus egg counts at different sample times and sample method.