

Additional feeding of *Asa foetida* to sheep infested with *Haemonchus contortus*: Evaluation of fecal egg count and haematocrit

L. Podstatzky¹, R. Chizzola², G.M. Witschnig³

¹Agricultural Research and Education Centre (AREC) Raumberg-Gumpenstein, 8952 Irdning, Austria

²Institute of animal nutrition and functional plant compounds, university of Veterinary Medicine Vienna, 1210 Vienna, Austria

³Division of Organic Farming, University of Natural Resources and Life Sciences, 1180 Vienna, Austria

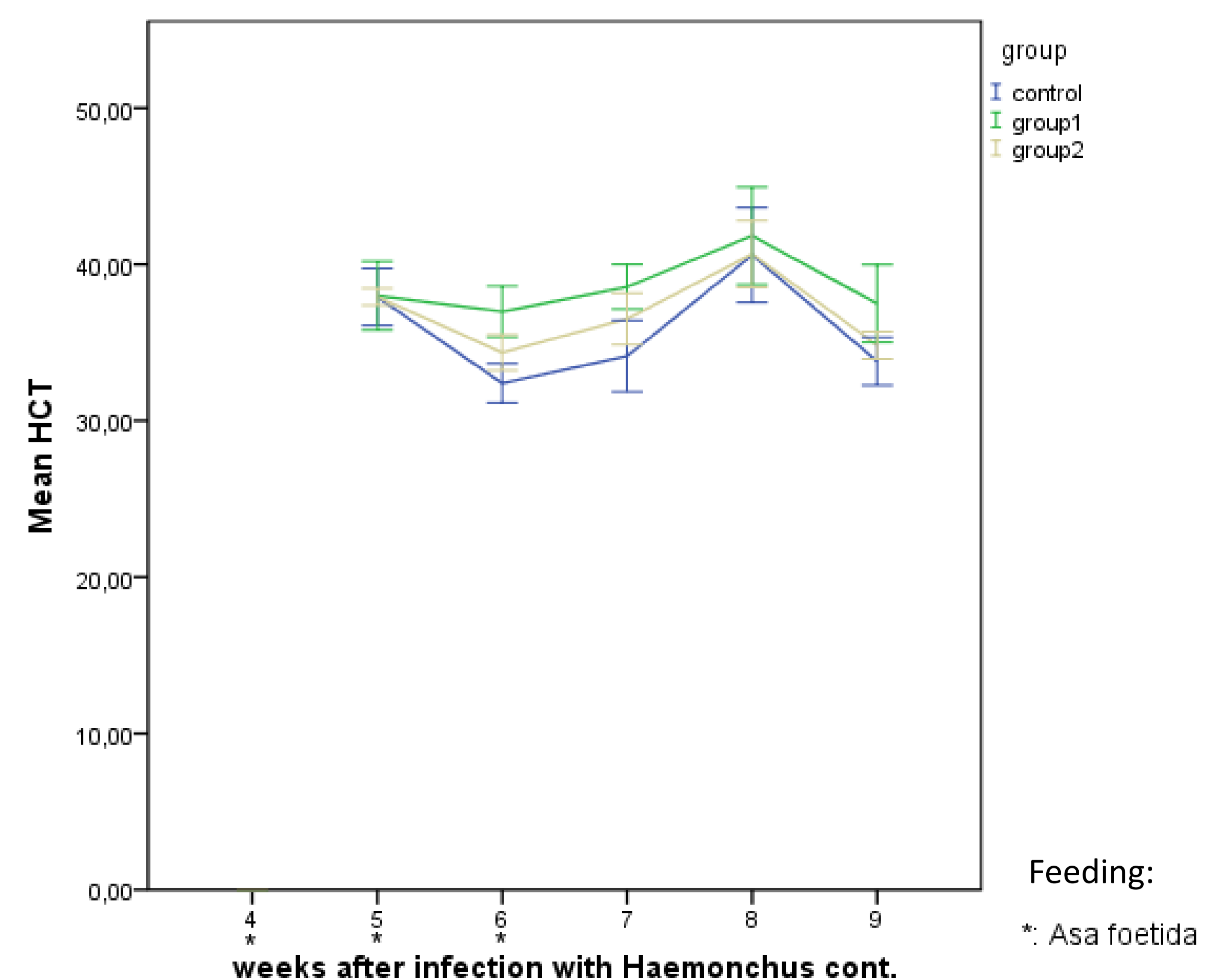
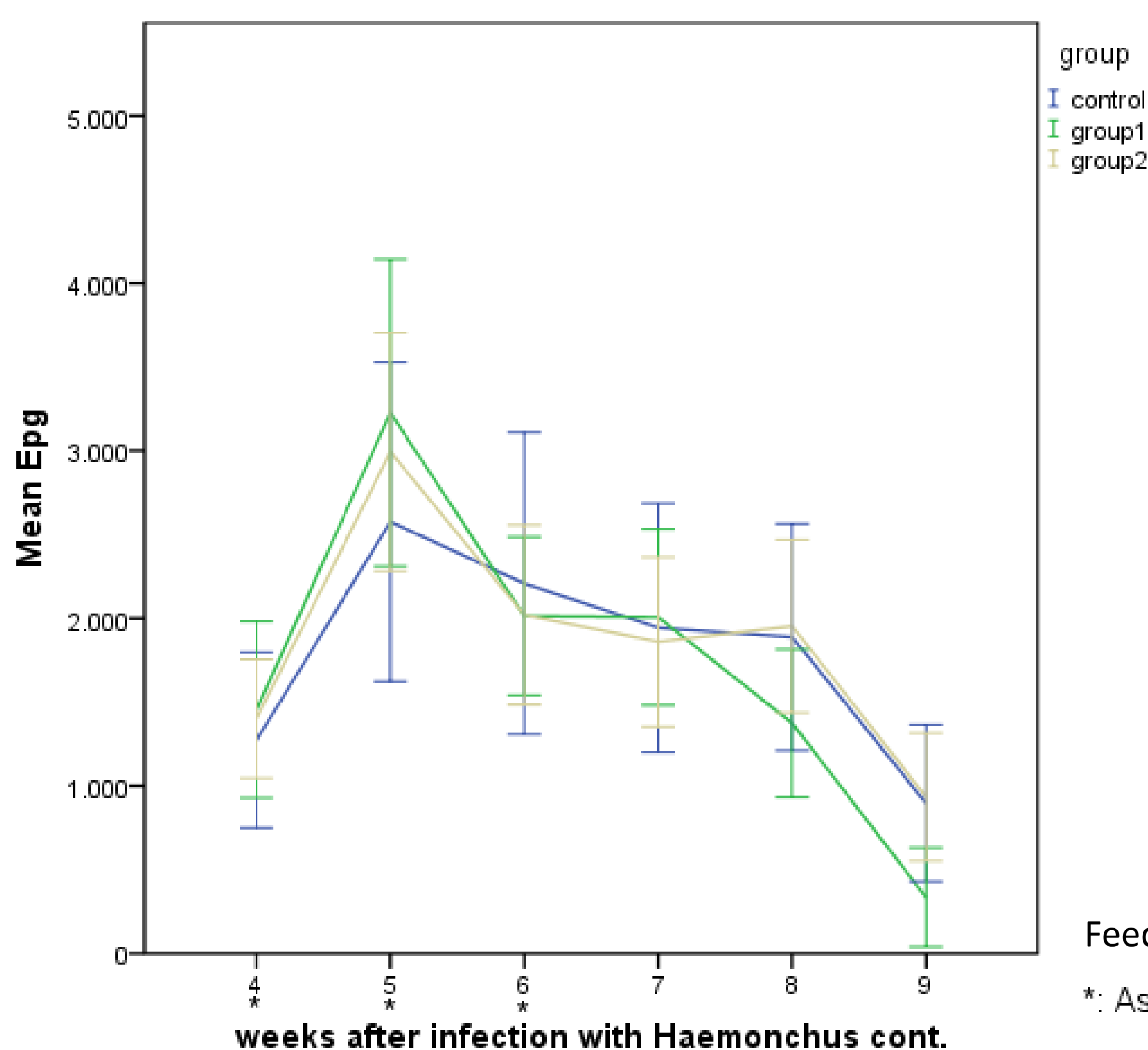
Introduction

Asa foetida, the resinous product extracted of *Ferula assa-foetida* L. (Apiaceae) is used as a remedy in the central region of Asia in diseases including endoparasitism in humans. In this trial powdery *Asa foetida* was additionally fed to sheep, infected with *Haemonchus contortus*, to evaluate fecal egg count (Epg) and haematocrit (HCT).

Material and methods

Treatment and examination	week	control	Group 1	Group 2
		n = 5	n = 6	n = 6
Infection	0	1200 Larvae III <i>Haemonchus contortus</i>		
Daily feeding of <i>Asa foetida</i>	4 - 6	10 ml water	0,08 g <i>Asa foet.</i> in 10 ml water	0,16 g <i>Asa foet.</i> in 10 ml water
Epg	4 - 9	Weekly		
HCT	5 - 9	Weekly		

Results



Conclusion and discussion

The additional feeding of two concentrations of *Asa foetida* to sheep, infected with *Haemonchus contortus*, confirmed no effect on fecal egg count and haematocrit. Egg count decreased in all animals to the end of the experiment. The missing effect could be connected with low amounts of sulfur compounds (7.6 ppm *E*-n-propenyl-*sec*-butyl-disulfide and 4.6 ppm *Z*-n-propenyl-*sec*-butyl-disulfide). Other samples of *Asa foetida* from Afghanistan showed much higher amounts of these compounds (more than 3000 mg/kg) but pharmacopeia quality was not ensured. More information and examination are necessary in pharmacologically active constituents in different accessions of *Ferula assa foetida* to assess the potency of such an additional feeding for endoparasite control.