

INFLUENCE OF INSOLUBLE CARBOHYDRATES ON THE POPULATIONS OF ASCARIS SUUM AND OESOPHAGOSTOMUM DENTATUM IN PIGS

Saulius Petkevičius,
Lithuanian Veterinary Institute,
LT- 4230 Kaišiadorys, Lithuania

Peter Nansen,
Danish Center for Experimental Parasitology, Department of Veterinary Microbiology,
Royal Veterinary and Agricultural University,
Ridebanevej 3, DK-1870 Frederiksberg C, Denmark

Knud Erik Bach Knudsen,
Department of Animal Nutrition and Physiology, Danish Institute of Agricultural Sciences,
Research Center Foulum,
P.O. Box 50, DK-8830 Tjele, Denmark

Summary. This study compares the influence of diets with different levels of insoluble carbohydrates on the populations of *Ascaris suum* and *Oesophagostomum dentatum* in pigs. Twenty-eight parasite-free pigs, from a specific pathogen-free farm were randomly divided into four groups of 7 animals each. All experimental pigs were inoculated with 600 infective *A.suum* eggs and 6000 infective *O.dentatum* L3 larvae and observed coprologically for 11 weeks post infection, whereafter they were slaughtered, worm numbers, location, sex, development stage and female worms fecundities were determined along with the concentration of insoluble marker and insoluble carbohydrates. *A.suum* faecal egg counts and worm burdens were low and comparable in all diet groups. The diet D with the highest level of insoluble carbohydrates provided favourable conditions for establishment of *O.dentatum*, whereas diets A and B led to a significant reduction in worm numbers and female worm fecundities.

Keywords: *Ascaris suum*, *Oesophagostomum dentatum*, insoluble carbohydrates, pigs, nutrition.