

THE INFLUENCE OF SOLUBLE AND INSOLUBLE CARBOHYDRATES ON THE ESTABLISHMENT OF *OESOPHAGOSTOMUM DENTATUM* AND ON ALREADY ESTABLISHED INFECTION IN PIGS

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Summary. The influence of diets varying in the content of soluble and insoluble carbohydrates on the establishment of *Oesophagostomum dentatum* and on already established infection was investigated. Sixty- four pigs from a SPF farm were randomly divided into eight equal groups A-H. The pigs in six groups (48 pigs totally) were inoculated with 6,000 infective L3 larvae of *O. dentatum*. The animals were fed on the diets: diet 1 (groups A-D) - barley flour, oat husk meal plus protein mixture (55 % : 21 % : 24 %) and diet 2 (groups E-H) - barley flour, inulin and sugar beet fibre (80.1 % : 7 % : 12.9 %) plus protein concentrate (3:1). The groups D and H were permanently fed on diet 1 and diet 2 throughout the experiment. To define *O. dentatum* populations at an early stage of the infection sixteen pigs (groups B and F) were slaughtered 3 weeks post inoculation (p.i.). At week 6 after infection cross-over design has been used, when eight pigs changed from diet 1 to diet 2 (group C), and eight pigs from diet 2 - to diet 1(group G). All remaining pigs were slaughtered at week 12 p.i. The diet with high levels of insoluble DF and lignin provided favourable conditions not only for the establishment of *O. dentatum*, but also for already established infection. The inclusion of highly degradable carbohydrates to the diet decreased the establishment, size and fecundity of females *O. dentatum*.

Keywords: oesophagostomum dentatum, soluble and insoluble carbohydrates, pigs