

CYSTICERCOSIS OUTBREAK IN FATTENING BOVINES

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Cysticercosis is a parasitic disease of cattle caused by human tapeworm *Taenia saginata*. Cattle are the intermediate hosts and harbour a larval form called *Cysticercus bovis*, which resides primarily in skeletal and cardiac muscle tissues. To prevent completion of the life cycle of *T. saginata* animals for slaughter are routinely inspected for presence of cysticerci. Carcasses that contain cysticerci on meat inspection are confiscated or in case of very mild infestation have to undergo a cold treatment at –18 °C for 10 days to be declared fit for human consumption according to regulations (EU Zoonosis Directive 2003/99/EC and Regulation EC 854/2004). Infested animals are asymptomatic and there is no treatment that can clear the cysticerci from muscle tissues, so it is not possible to prevent zoonosis measures after slaughter in case we suspect infestation. Thus, economic impact of infestation is very significant. The only prevention of the disease is to prevent consumption of human faeces by cattle. Since cattle are known for coprophagy of human faeces, all efforts should be made to prevent human faeces to come into contact with cattle. The aim of the study was to investigate a cysticercosis outbreak in a fattening bovine herd.

A fattening bovine herd of 220 animals was included in the study. Management practices were analysed. Meat inspection for cysticercosis was conducted. Stool samples from persons working at the farm were examined by microscopy, copro-antigen ELISA and copro PCR for *T. saginata*. Basic descriptive statistics were calculated.

In a fattening bovine herd of 220 animals 13 (5.9 %) animals were recognised as having cysticerci at carcass inspection. None of the carcasses were confiscated, but all had to be cold treated before selling. All the persons working at the farm tested negative for taeniasis.

This was the first case of cysticercosis in the examined herd. Animals in the herd were divided into boxes with 10 to 30 animals and infested animals came from boxes located at different parts of the barn. Due to such distribution of cases there is a high probability that ova from *T. saginata* were dispersed by total mix ration. Prevalence of cysticercosis in cattle in Slovenia was from 0.003 to 0.05 % according to official meat inspection findings and just 0 to 20 persons per year were diagnosed as having *T. saginata* reported by Administration of the Republic of Slovenia for Food Safety, Veterinary Sector and Plant Protection in the 7 years period before the outbreak and up to year 2018. Even though prevalence of cysticercosis is very low in Slovenia, this case proves that strict meat inspection for cysticercosis is prudent. Possible ways of infestation and strategies to prevent cysticercosis in cattle are discussed.

Keywords: *TAENIA SAGINATA*, CATTLE, PARASITIC ZOOONOSIS, MEAT INSPECTION, PREVENTION