

ANTHELMINTIC RESISTANCE IN SHEEP FARMS IN LITHUANIA DETECTED BY *IN VITRO* MICRO-AGAR LARVAL DEVELOPMENT TEST

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Abstract. This study was conducted to determine the frequency of anthelmintic resistance (AR) in sheep gastrointestinal nematodes in Lithuania to benzimidazoles and levamisole. The survey was conducted from May 2014 to November 2014. An *in vitro* method Micro-agar larval development test (MALDT) was used for this study. In total, 23 sheep farms were investigated. Seventeen sheep farms were tested for AR to benzimidazoles and six sheep farms were tested for AR to levamisole. The studied sheep flocks consisted of 50-800 animals on each farm. The last anthelmintic treatment had to be carried out at least 10 weeks before the beginning of the study. On each farm, faecal samples from the rectum of 15–20 animals were randomly taken. Resistance to benzimidazoles were found on 12 farms (70.6 %). Resistance to levamisole were found on two farms (33.4 %). This *in vitro* study showed that sheep farms in Lithuania already have problems with AR, especially with resistance to benzimidazoles.

Keywords: anthelmintic resistance, *in vitro*, sheep, benzimidazoles, levamisole