

IN VIVO ASSESSMENT OF THE ANTIPARASITIC EFFECTS OF *ALLIUM SATIVUM* AND *ARTEMISIA ABSINTHIUM* AGAINST GASTROINTESTINAL PARASITES IN SWINE, FROM LOW-INPUT FARMS, IN NW OF ROMANIA.

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INTRODUCTION

Ethno-veterinary practices could be used as sustainable development tool by integrating traditional husbandry and phytotherapy (Khan et al., 2021). Phytotherapeutic remedies are available and used worldwide, evidence of their antiparasitic efficacy is currently very limited but is nevertheless still necessary (Githiori et al., 2005). Parasitic diseases have a resounding effect on the swine industry by diminishing productions through morbidity and mortality (Opara et al., 2006; Krishna Murthy et al., 2016). Low-input farming is facing several constraints, chief among them being parasitic diseases (Kagira et al., 2012).



Fig. 1. Picture showing a low-input farm.

AIMS

The present study was designed to assess the antiparasitic potential of *Allium sativum* and *Artemisia absinthium* on naturally occurring gastro-intestinal parasites of swine in two low-input farms from Transylvania.

MATERIALS AND METHODS

Seven hundred twenty samples collected from weaners, fatteners, and sows were investigated using the following methods: flotation, modified Ziehl-Neelsen stained fecal smear, centrifugal sedimentation, modified Blagg technique, McMaster method and faecal cultures.



Fig. 2. All the materials necessary for the coproparasitological methods.

RESULTS

The examination confirmed the existence of parasitic infections with *Eimeria* spp., *Cryptosporidium* spp., *Balantidium coli*, *Ascaris suum*, *Oesophagostomum* spp., *Strongyloides ransomi* and *Trichuris suis*. A powder supplement of *Allium sativum* L. and *Artemisia absinthium* L. administered for 10 consecutive days revealed a strong antiprotozoal and anthelmintic activity, against the aforementioned pathogens.



Fig. 3. Coproparasitological examination results: *Oesophagostomum* spp. egg, *A. suum* egg, *Eimeria* spp. oocyst, *Cryptosporidium* spp. cyst, *S. ransomi* female, *B. coli* egg and *T. suis* egg.

CONCLUSIONS

These results demonstrate that both *A. sativum* and *A. absinthium* have the potential of treating gastrointestinal parasitosis in swine. The curative efficacy can be attributed to the presence of polyphenols, tocopherols, flavonoids, sesquiterpene lactones and sulfoxide. Despite these results, further research is required for establishing the minimum effective dose of each studied plant on gastrointestinal parasites from swine.

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