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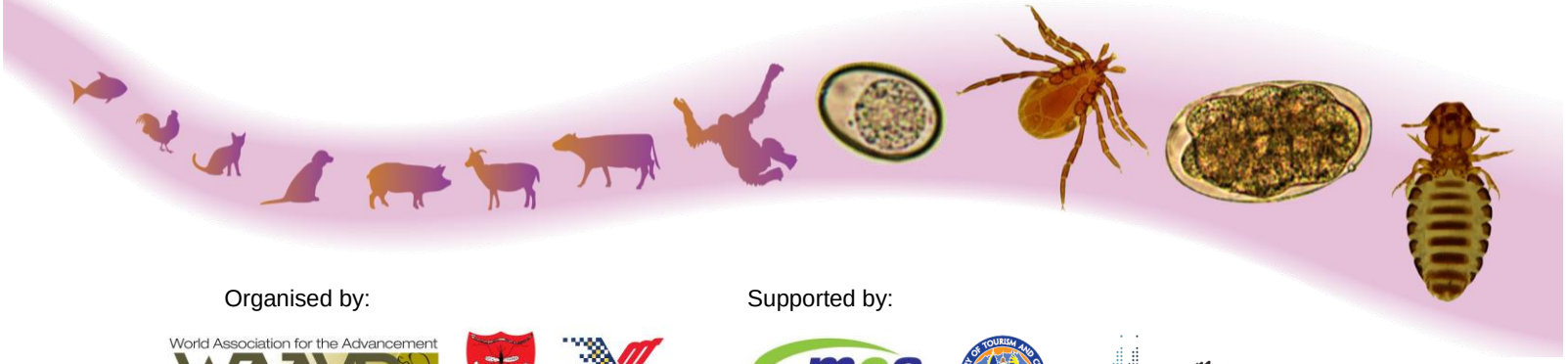
Conference Theme

Combating Zoonoses: Strength in East-West Partnerships

ABSTRACT BOOK



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The impact of anthelmintic resistance on beef cattle productivity

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Abstract Content

The goal of the current study was to evaluate, in a commercial beef-cattle farm, the impact of anthelmintic resistance (AR) on the productivity of calves naturally infected with gastrointestinal nematodes resistant to ivermectin (IVM) and moxidectin (MXD).This trial included two herds grazing on different forage resources: Herd A in a maize-winter forage crop rotation (low re-infection) and Herd B in a two-year-old *Agropyrum* pasture (high re-infection). In each herd, eighty male calves were randomly allocated into four groups (n= 20): Control group (CG): without anthelmintic treatment; IVM group: treated with IVM (0.2 mg/kg); MXD group: treated with MXD (0.2 mg/kg); IVM+RBZ group: treated with IVM and ricobendazole (RBZ) (0.2 and 3.75 mg/kg, respectively). All treatments were given by the subcutaneous route. The clinical efficacy was determined by FECRT 20 days post-treatment. On days 0, 20, 35, 67 and 90, individual weights were registered. The clinical efficacies were 42% (IVM), 67% (MXD) and 99% (IVM+RBZ). *Cooperia* spp. and *Haemonchus* spp. were the genera involved in AR. In Herd A the total weight gains (TWGs) in the 90 day-period increased by 0% (IVM), 59% (MXD) and 90% (IVM+RBZ) compared with the Control group. In Herd B the TWGs increased by 64% (IVM), 97% (MXD) and 151% (IVM+RBZ) compared with the Control group. The effect of AR on live weight gains was significant (Tukey, $P<0.05$) in both forage resources. In conclusion, anthelmintic resistance has a high impact on beef cattle productivity.

Keywords: Anthelmintic resistance; Ivermectin; Moxidectin; Cattle; Productivity