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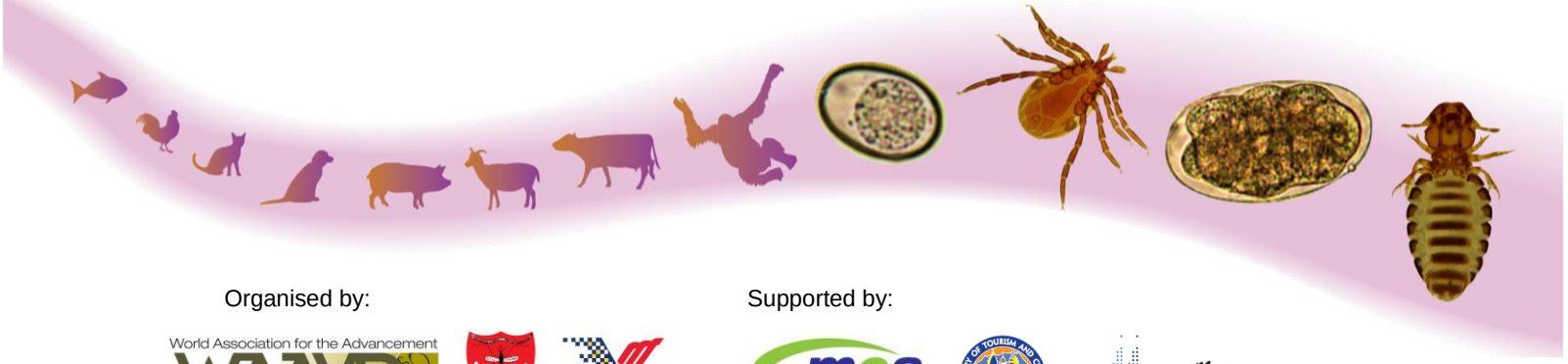
Combating Zoonoses: Strength in East-West Partnerships

ABSTRACT BOOK



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Inadequate management of anthelmintic resistance: A real-world case in a cattle commercial farm

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Abstract Content

Routine Faecal Egg Count Reduction Tests (FECRT) in a cattle commercial farm shows the effect of an inadequate management in the introduction of gastrointestinal nematodes resistant to different macrocyclic lactones (ivermectin-IVM-, moxidectin-MXD-, eprinomectin-EPR-, abamectin-ABA- and doramectin-DRM-). The "case-study" farm had been a cow-calf system for many years in the past, with low (1-2) anthelmintic treatments each year. However, it changed its productive activity to grazing cattle fattening in 2015, based on the introduction of steers from different farms, which are treated at arrival with IVM to prevent sarcoptic mange. In 2015, the efficacy (FECRT) against *Haemonchus* spp. was 42% (IVM) and 97% (MXD), while the efficacy against *Cooperia* spp. was 78% (IVM) and 98% (MXD). The presence of resistance to IVM was evident, while MXD maintain high levels of efficacy. The next year, the efficacy against *Haemonchus* spp. dropped to 0% (IVMsc), 72% (MXD), 28% (EPR), 7% (ABA), 0% (DRM) and 5% (IVMoral), while the efficacy against *Cooperia* spp. was varied: 0% (IVM), 97% (MXD), 100% (EPR), 0% (ABA), 0% (DRM) and 0% (IVMoral). The efficacy against *Ostertagia* spp. was 100% for all treatments. The drastic decline in the efficacy of IVM and the very low efficacies obtained for all macrocyclic lactones treatments in 2016 (even for MXD and IVMoral) could be explained by some inadequate management measures: the selection of resistant population by the IVM treatment used as preventive of sarcoptic mange at the arrival of animals (although it was only one treatment), and the lack of quarantine procedures to avoid the introduction of parasite strains highly-resistant to macrocyclic lactones.

Keywords: Anthelmintic resistance; Macrocyclic lactones; Cattle; Management