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New study shows horse owners need to understand resistance to dewormers as a serious health threat

Horse owners are increasingly looking to vets for worm control advice and use faecal worm egg counts more frequently but are largely unaware of the threat of resistance to dewormers and the importance of appropriate 'targeted' dosing, concludes a new questionnaire-based study, published in the *Equine Veterinary Journal* (EVJ)¹. Although the findings are encouraging, they indicate that further effort is needed to help owners fully understand the issue of dewormer resistance, in order to help preserve the efficacy of dewormers currently available and protect the health and welfare of their horses.

Resistance of equine gastrointestinal worms to the currently available dewormers is a serious problem. Small redworm are the greatest concern, given their very high prevalence, potential to cause life-threatening disease and high levels of resistance. Of the three classes of anthelmintic available for their control, there is now widespread resistance to benzimidazoles (e.g. fenbendazole) and tetrahydropyrimidines (e.g. pyrantel) and reduced effectiveness of macrocyclic lactones (ivermectin and moxidectin). With no new classes of dewormer on the horizon, it's essential that efficacy of existing effective products is preserved.

The study was conducted by a UK team, led by Claire Stratford, Horse Trust Clinical Scholar in Equine Medicine at the Royal (Dick) School of Veterinary Studies, University of Edinburgh, and at Moredun Research Institute. The collaborators were also supported by funding from the Elise Pilkington Trust and Horserace Betting Levy Board. The study examined equine helminth control practices in Scotland, and was based on responses from 193 questionnaires detailing the parasite control programmes of 993 horses and ponies. The results demonstrated a lack of awareness of the significance of dewormer resistance, with 86% of respondents stating that they were unaware of the presence of resistance on their yard. The majority were relatively unconcerned about dewormer resistance, assigning a score

of only 6/10 (with 10 representing highest level of concern) when asked to grade how important they perceived it to be. On a more positive note, many respondents stated that they involved their vet in planning control strategies. Faecal worm egg count (FWEC) analysis had been performed on 62% of yards and annual treatment frequency had been reduced accordingly. The macrocyclic lactones or related combination products were the most commonly administered products; however, owners did have misconceptions regarding the specific worms they should be targeting. Although treatments licensed for use against encysted small redworm larvae were administered by 80% of respondents, only 57% perceived that they treated for this parasite stage. Similarly, only 78% of respondents believed they were treating for tapeworm when, in fact, 90% reported using a product licensed for tapeworm treatment.

While responses indicated increased implementation of strategic (44% respondents) or targeted control (40% respondents), variations in the apparent influence of the targeted approach on treatment practices suggested some confusion over this term. “Targeted dosing involves using regular FWEC analysis to identify an individual’s egg shedding level,” explained Claire Stratford. “This is currently considered best practice, when used in conjunction with annual dosing against encysted small redworm and tapeworm. The survey indicates a need for continued knowledge transfer, together with a consistent definition of ‘targeted’ treatment.”

Professor Celia Marr, Editor of Equine Veterinary Journal said: “It’s very encouraging to see that vet advice is being increasingly sought and it seems logical that the use of FWECs is rising accordingly. But, it is equally important that the information gained from the FWECs is used wisely. Resistance to dewormers is a major health concern that is with us right now and horse owners need to be made more aware of it.”

¹*A questionnaire study of equine gastrointestinal parasite control in Scotland* CH Stratford, HE Lester, ER Morgan, KJ Pickles, V Relf, BC McGorum, JB Matthews

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Notes to editors

- <http://onlinelibrary.wiley.com/doi/10.1111/evj.12101/abstract>
- *EVJ* is an unrivalled international equine veterinary science journal owned by the British Equine Veterinary Association and is published by Wiley-Blackwell. The journal strives to publish clinically orientated research and was first published in 1968. It now appears bi-monthly with around 128 pages per issue.
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