

Practical considerations for performing a fecal egg count reduction test (FECRT) following the new WAAVP guidelines

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A new updated World Association for the Advancement of Veterinary Parasitology (WAAVP) guidelines document for performing fecal egg count reduction tests (FECRT) in ruminants, horses and swine was recently published. The FECRT is a field-based diagnostic test designed to not only measure the level of egg reduction, but to also permit the introduction of diagnostic criteria that have statistical validity and clinical relevance. There are a number of factors that must be considered when planning an FECRT; these can be broadly subdivided into issues related to: study design, sample size considerations, choice of FEC methods, statistical data analysis, and interpretation. These new guidelines were developed using the best available evidence and provide guidance for performing each aspect of a FECRT. From a practical standpoint, the most important consideration in planning an FECRT is to ensure that the group size is sufficient to obtain a conclusive result. There are several important factors that impact the required group sizes, and detailed explanations of these factors are provided. Furthermore, the guidelines provide a number of different options for required group sizes in order to provide logistical flexibility; however, a minimum group size requirement of five animals must always be maintained. Finally, there are two versions of the guideline: (i) a more resource-intensive 'research protocol' that is intended for use in scientifically based studies, and (ii) a less demanding 'clinical protocol' requiring fewer animals and fewer eggs counted, which is generally intended for use by veterinarians and livestock owners. It is important to note that both approaches can be considered equally robust from a statistical and scientific perspective. However, because of the inherent trade-off between logistical considerations and the expected sensitivity to detect small reductions in efficacy, the 'clinical protocol' will more often yield inconclusive results as compared to the 'research protocol'.