Validation of a new Faecal Egg Counting Technique for horses – University of Bristol, UK

Summary

Faecal egg counts are at present the only satisfactory way of deciding when to treat animals with anthelmintics. The McMaster technique, which is the method currently used, was developed for counting nematode eggs in faecal samples in sheep. An uneven distribution of nematode eggs in horse faeces leads to variable counts at lower faecal egg densities using this method.

A more sensitive and repeatable is required that can be used by horse owners themselves to determine if and when their horses require treatment with anthelmintics.

FECPAK New Zealand has developed a kit for faecal egg counts for sheep and cattle faeces that does not require use of a centrifuge. It involves taking a larger initial sample, and has a counting chamber with total volume of 1ml compared to 0.3ml in the McMaster slide.

The aim of this project was to validate the technique for use with horse faecal samples. The optimal dilution of sample to water was found to be 1:4. At low egg counts where a known number of eggs (50, 100, 200) were added to egg free samples only 2/5 were positive for the McMaster at 50 and 100 epg (5/5 positive at 200epg) (m=20, 50, 140) compared to 5/5 at all concentrations (m=40, 90, 185) for the FECPAK.

When serial tests were performed on an unmixed sample (n=20) for the McMaster m=323, SD +/- 90, range 400, compared to m=183 SD +/- 67 and range 150 for the FECPAK.

FECPAK is simpler, and more repeatable and sensitive than the traditional method of faecal egg counting. The ability to use the kit on yard will enable owners to treat their animals when required, to avoid unnecessary treatments thus saving money and reducing the risk of development of resistant parasites. The project was funded by FECPAK NZ.