



College of Agriculture, Food and Rural Enterprise (CAFRE)

Equine Parasite Control Project

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1. Introduction

The Equine Parasite Control project was set up to aid owners in managing their horse's parasite burden and to increase CAFRE's knowledge of the parasite status of the Northern Ireland equine population. On a seasonal basis owners were encouraged to determine their horse's parasite burden by faecal sampling for parasite eggs (faecal worm egg counts, FWEC) and saliva swabbing for tapeworm antibodies (EquiSal Tapeworm Saliva Test). The following information summarises data from all horses on the project.

2. Project Summary – All Horse Data

Thirty-five horses were registered with the project from June 2016 until May 2017 although data was only provided for 14 horses. The most popular season for providing data was Autumn¹ with results for 11 horse's saliva tapeworm tests and five horses FWEC. Since Autumn the number of participants providing data has decreased considerably despite continued reminders to sample horses and upload results to the project database. Methods used to encourage more owners to provide their horse's information seem to be failing therefore a review of potential alternative methods is required.

EquiSal Tapeworm Saliva Test

The yearly calendar was divided into seasons¹ to match the seasonal recommendations for parasite control in horses. Anthelmintic administration for controlling Tapeworms is traditionally recommended in Autumn and Spring. This recommendation has now been replaced by one to saliva test at these times and administer anthelmintics if a Tapeworm burden is detected. Eleven saliva test results were provided in Autumn 2016 showing that just over half of the horses required no anthelmintic treatment (6 out of 11, Table 1) however five of the horses produced positive test results for tapeworm antibodies leading to borderline and moderate/high results. Such horses were recommended to be administered an anthelmintic treatment for Tapeworms by a qualified SQP.

Saliva test results were provided for eight horses in Spring 2017 (Table 1). Of the eight horses, seven were reported as having a negative or low Tapeworm burden therefore requiring no treatment. The horse that was reported as having a moderate/high burden in Spring testing was the same horse that was reported as having a moderate/high burden in the previous Autumn. The repeated moderate/high result may be attributed to grazing poor quality pasture that enables reinfection with Tapeworm, reinfection from grazing infected pasture when out visiting competitions, under-dosing of the anthelmintic treatment in response to the Autumn 2016 result, reinfection from other horses with moderate/high burdens and Tapeworm resistance to treatment. It will be interesting to see if September 2017 testing shows a decrease in Tapeworm burden for that horse.

1. Summer – June, July and August
Autumn – September, October and November
Winter – December, January and February
Spring – March, April and May

Table 1. Number of horses reported as having a low, borderline and moderate/high tapeworm burden during Autumn 2016 and Spring 2017 when tested using the EquiSal Tapeworm Saliva Test.

Tapeworm Burden	Autumn 2016	Spring 2017
Low	6	7
Borderline	4	0
Moderate/High	1	1
<i>Number of horses results provided for</i>	11	8

Faecal Worm Egg Counts

Faecal worm egg counts are used primarily to detect the presence of roundworms and should be carried out once every season. Faecal worm egg count results were provided for seven different horses over the 12 month period although the most results gathered for any individual horse was three seasons (Summer and Autumn 2016 and Spring 2017 for EQ14) (Table 2). The absence of 12 month profiles for the horses registered to the project makes evaluation of the results difficult due to trends in individual horse's parasite burdens not being available.

Table 2. Number of horses for which faecal worm egg count data was provided during each season.

Season	Number of FWEC results	Horses FWEC results were provided for
Summer 2016	2	EQ14 & EQ19
Autumn 2016	5	EQ14, EQ20, EQ25, EQ27 & EQ37
Winter 2016	1	EQ38
Spring 2017	2	EQ14 & EQ37

EQ: Equine identification code individual to each horse registered on the project

A positive result for project to date is that all FWEC results received reported negative or extremely low (0-100 eggs per gram of faeces [epg]) results for all parasite species tested². Only FWEC results above 200epg are recommended to be treated with an anthelmintic appropriate for the type of parasite identified. The finding that none of the horses tested required anthelmintic treatment is a positive output of the project to date and indicates a low parasite burden across the registered project horses. Had testing not been performed the horses may have been administered anthelmintic treatment unnecessarily, increasing the potential for anthelmintic resistance development.

Faecal worm egg count results were not provided for the horse that was identified as having a moderate/high Tapeworm burden. If that horse also had increased FWEC results it could indicate the need for a review of management practices and the parasite control programme.

2. Faecal worm egg counts tested for Ascarids, Coccidia, Cyathostomes, Fasciola, Strongyles and Strongyloides

Conclusions

The results provided indicate a low roundworm burden in horses registered to the project and a decreasing Tapeworm burden. More in-depth analysis is prevented due to the sporadic nature of the results provided. In response to this issue increased engagement between CAFRE and project participants is required with the aim of increasing the amount of data provided for each horse registered on the project. There is also a requirement to increase the number of people and horses registered on the project so the sample population is more representative of the wider Northern Ireland equine population.

I want to thank you for being part of the CAFRE Equine Parasite Control project and for providing data. I hope you will continue to utilise the techniques and remain on the project in the future.