

Effect of Prevalence of Age, Season and Housing System on Internal Parasites and Anthelmintic Efficacy in Horses

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The effective control of internal parasites is important in maintaining horse health. The objective of this study was to determine the prevalence of internal parasites and anthelmintic efficacy in horses in relation to age, season and housing system. Fecal samples were collected from 65 horses and analyzed by the fecal float method, with the number of internal parasites recorded as eggs per gram (EPG) of feces and fecal egg count (FEC) reduction was calculated as (pre-treatment EPG minus post-treatment EPG)/pre-treatment EPG. Treatment with pyrantel pamoate was considered effective if FEC reduction was $\geq 90\%$ by day 14 post-treatment. Fecal egg count data were collected prior to treatment with pyrantel pamoate at the recommended dosage and 14 days post-treatment. Pinworm, tapeworm, hookworm, whipworm, ascarid, and strongyle eggs were identified in this study; however, strongyle, ascarid and tapeworm eggs were the most prevalent. Young horses (<3 years of age) had greater FEC as compared to mature horses (464.35 ± 239 EPG vs. 198.89 ± 234 EPG). FEC were greater during the summer months compared to winter months (190 ± 142 EPG vs. 127 ± 130 EPG). Horses maintained on pastures had greater FEC than horses kept in stalls (280.4 ± 261 EPG vs. 72.6 ± 100 EPG). Resistance to pyrantel pamoate was evident regardless of the age of the horses, season or housing system. In this study, treatment with pyrantel pamoate was more effective at reducing FEC in mature horses (27.8%) compared to young horses (14.3%). Pyrantel pamoate was found to be more effective at reducing FEC in the summer months (15%) as compared to the winter months (0%). Horses maintained on pastures were less resistant (21.4%) to treatment with pyrantel pamoate compared to stalled horses (16.7%). Overall, pyrantel pamoate was not considered effective in reducing FEC on this farm.