Parasitic Drug Resistance in Horse

Resistance in parasitic nematodes to anthelminthics (dewormers) is becoming a serious problem in all animals including horses. In horses, the small strongyle (cyanthostome) which is the most damaging is becoming resistant to two of the three classes of dewormers. Resistance to a single dose of benzimidazoles (fenbendazole, oxibendazole) approaches 100% while the tetrahydropyrimidines (pyrantel pamoate and tartrate) is 50%. Other parasites such as Parascaris equorum (roundworms), the most pathogenic nematode in foals is also showing some resistance to ivermectin and moxidectin.

This emerging population of resistance nematodes is limiting the number of useful dewormers when no new drugs are being developed. The urgent need to slow down the accumulation of drug resistance gene alleles, limit parasite egg production and resulting pasture contamination and preserve the efficacy of the remaining dewormers by using them less frequently and more selectively has prompted a revision of thinking about the goals of parasite control in horses. Parasite eradication is no longer considered a realistic goal.

To minimize and try to stop parasite resistance it is now suggested that fecal samples are taken twice a year so than an individual deworming program can be customized for each horse. Some horses are resistant already and are now considered shedders. They are the horses that maintain the population of parasites and infect others. Not all horses are infected with the same type of parasite either so one dewormer for all is no longer appropriate. Frequent deworming also leads to resistance so using fecal analysis can decrease the number of times a horse is dewormed.