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Parasite Control in Young Horses

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Martin Nielsen, DVM, PhD, Dipl. EVPC, ACVM, assistant professor in the University of Kentucky Department of Veterinary Science at the Gluck Equine Research Center, lectured on parasite control in young horses at the 6th annual Kentucky Breeders' Short Course, held Jan. 24 in Lexington, Kentucky.

Nielsen emphasized the significance of anthelmintic resistance during his presentation and highlighted the various dewormers that have the greatest and poorest effect today.

Traditionally, farm managers have opted to apply year-round treatments at regular intervals, often referred to as rotational deworming. Veterinarians and caretakers believed this provided continual protection from parasites. Nielsen referenced a study conducted by the National Animal Health Monitoring System in 1998 that showed United States horse farms using an average of four or more treatments per year. Similar international studies show South African and British farms using an average of five to seven treatments per year.

"But change is coming," Nielsen said. "We did not eradicate a single parasite species. We have instead encountered the dreaded 'R' word—resistance. There is no single drug that guarantees full effect."

Strongyles and ascarids have become resistant to many of the dewormers used today. All of the drugs labeled for equine use (ivermectin, moxidectin, fenbendazole, and pyrantel) have lost efficacy to at least one type of equine parasite.

"At the same time, all drugs still have efficacy against some parasites," Nielsen said. "But they have lost efficacy against others. Instead of being broad-spectrum, drug classes are now complementary to each other."

Nielsen used a jigsaw puzzle as an analogy. To obtain the best parasite control possible, farm managers must employ different drugs that work together to provide a broad range of control. For example, benzimidazoles (fenbendazole and oxbendazole) have strong efficacy against roundworms and large strongyles, but small strongyles have become widely resistant to this drug class.

Instead of using rotational deworming, the latest guidelines recommend performing fecal egg counts and treating according to results. An egg count can be used to evaluate the level of ascarid and strongyle egg shedding in a horse and determine the level of dewormer efficacy against each one. Knowing the relative presence of ascarids and strongyles in a horse can help owners or managers to identify the appropriate dewormer.

During his talk Nielsen focused on parasite control in foals. Foals experience their highest ascarid levels between 4 and 5 months old, after which time the strongyles take over. Tapeworms can occur after 6 months old. The first deworming should therefore focus on the ascarids at about 2 to 3 months old. At weaning, both parasite types might be present, and an egg count will reveal if ascarids are still the dominant type. At 8 to 9 months old, a weanling should be treated primarily for strongyles and possibly tapeworms. When a horse is a year old, another treatment should target strongyles and possibly tapeworms.

Nielsen stressed that a foal should receive four to five treatments within its first year of life. Treating less than this is not recommended due to the risk of parasite-associated disease, whereas more frequent treatments would need considerable justification due to parasite resistance. Find more information in Nielsen's book, co-authored with Craig Reinemeyer, DVM, PhD, "Handbook of Equine Parasite Control," which focuses on the biology of parasites, the general principles of parasite control, and the assessment tools for interpreting laboratory inform