PRACTICE ABSTRACT: 28

Sustainable PARasite Control in Grazing Ruminants

AI-driven fecal analysis: rapid and precise

Thanks to new technologies, veterinarians can now obtain the results of a fecal sample within just seven minutes. Preparing the sample takes only about five minutes. Instead of the lengthy preparation and the manual differentiation and counting of parasite eggs under the microscope, this AI-powered device provides an automated egg count per parasite species in no time.

Why fecal analysis

Prevention is better than cure; conducting fecal analysis is essential to help reduce resistance to anthelmintic treatments. Rather than routinely deworming the entire herd, fecal testing first allows determination of whether the animals are infected and, if so, with which parasite species. If no infection is detected, treatment is unnecessary. If infection is present, the most appropriate anthelmintic can be selected based on the findings. Moreover, targeted treatment of individual animals or smaller groups instead of the entire herd, enables more precise and sustainable parasite control. Most importantly, a follow-up fecal examination should be performed approximately two weeks after deworming to verify the efficacy of the treatment.

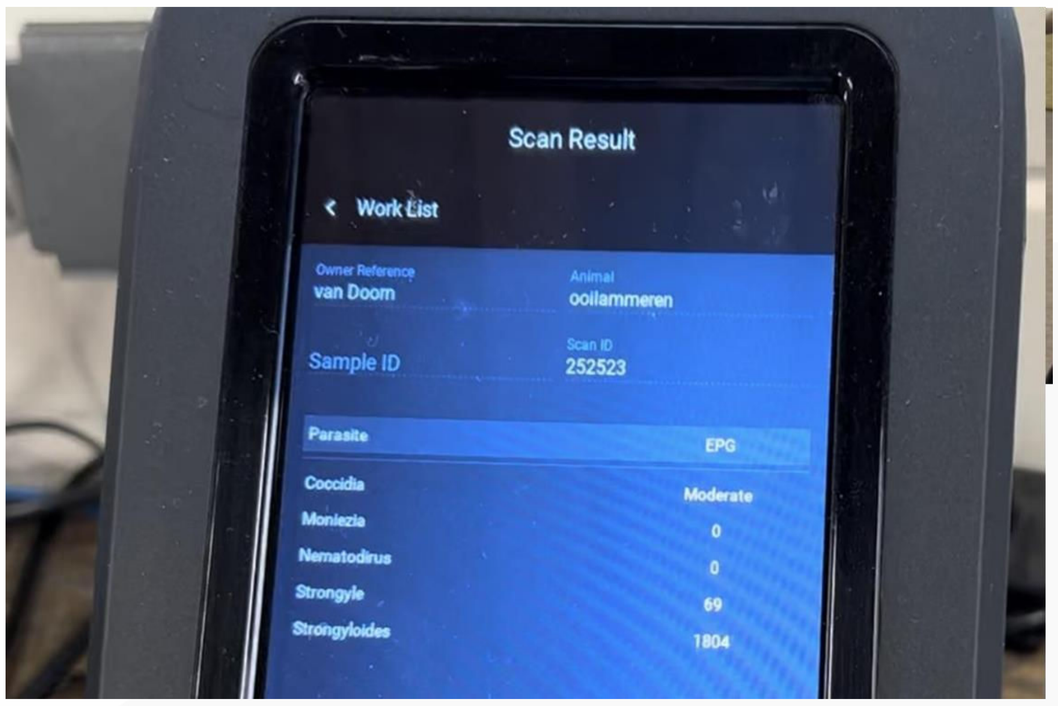
Analysis powered by AI

Fecal Egg Counts (FEC) and liver fluke analysis can now be performed using advanced AI-based equipment. It is essential to collect fecal samples from at least five different animals. Subsamples are then taken from various parts of each sample and accurately weighed.

NaCl solution is added and the mixture is subsequently filtered. The resulting liquid is drawn into a syringe and injected into a cassette, preparing the sample for microscopic analysis. The AI-powered microscope captures and analyzes over one million images to identify different parasite species and quantify the number of eggs or oocysts

present. Up to 150.000 parasites can be counted in a single analysis. The results are displayed on-screen within minutes, providing detailed egg counts per parasite species. Interpretations of these

results remain the responsibility of the veterinarian. The main advantage of this technology is the significant reduction in the time veterinarians spend on fecal analysis. This allows them to process more samples per day, increasing diagnostic capacity.



Bovine/Ovine (FEC test)	Bovine/Ovine (Fluke test)
Strongyles	*Fasciola hepatica*
Coccidia	*Paramphistomum* spp.
Nematodirus spp.	
Moniezia spp.	
Strongyloides papillosus	

Prevention is better than cure; conducting fecal examinations is crucial for reducing anthelmintic resistance. Artificial intelligence (AI) technology can now accelerate this process.

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