Emac  (Eimeria Macusaniensis) in Llamas and Alpacas

Emac is a very common parasite in Llamas and Alpacas and for our llamas we didn’t know how common until one year some time back we were informed that our neighboring cattle ranch discovered significant numbers of liver flukes so we acquired a FlukeFinder and tested our entire herd of 200 llamas for flukes, turned out 10% positive by the way. However perhaps the bigger revelation, what in the world were all of those things that looked like little avocados! According to the identification texts they were Emac eggs and in the hundreds or even thousands in some young animals, but how could this be!! In the past our fecal tests had shown an occasional small number of Emac eggs, and we treated immediately because of their reputation for being lethal. Panic!! How was it possible a healthy looking young llama could be walking around, let alone running, jumping and playing with hundreds of eggs per gram of fecal material and the only symptom being a slowdown in their daily weight gain? We weigh our crias daily (up to about one year of age) keeping a record and had observed these flatlines off and on over the years and considered them normal. The long term effects on their overall health and growth are impossible to know.

Fast forward… We had accidently discovered the tool designed as the best method to search for Liver Flukes was by far (understatement) the most sensitive method of obtaining actual counts of Emac eggs. Every cria that has been born here since this new testing method has shown these types of counts at least once, and mostly twice or even several times in their first year and ½, then are usually free from this particular parasite until perhaps in some when they get old and compromised for some reason.

Apparently Emac eggs have such a high specific gravity asking them to float is an exercise in futility and the Fluke finder works the opposite way by selecting the objects that sink and pouring off the material that floats. It is designed with two screens with different size mesh that lets the fluke eggs pass through the first screen and get held back by the second screen. Luckily Emac eggs are similar enough in size it works for them also. As an aside, Nematodirus family eggs are also in this size range and it has proven to be a very sensitive test for those also.

Now if I have convinced anyone raising crias that they should have a FlukeFinder, here are a few tips that seem to me to make it easier and more give accurate counts in llamas. Maybe it is unnecessary for exact counts, but personally I like to keep track. I use 3 grams of mashed feces stirred thoroughly with about ¾ to 1 inch of water in an 8oz solo cup. The Finder is designed for other animals, and llama feces is probably more processed and will tend to clog the first screen. The solution is several short bursts from the faucet until the water flows easily thru the debris on the first screen, then 4 or 5 flushing streams to rinse out all of the eggs. Follow the recommended timing for the rest of the procedure, but it may take more cycles to pour off enough debris so the sample is clean enough to make the eggs easier to see and count.

Don’t panic if you see hundreds of Emac eggs but consult with your vet immediately for a treatment plan.

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