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## The Equine Report

### TARGETED DEWORMING

There is a new trend in the horse industry towards minimizing excessive deworming and focusing on a more strategic plan targeted to each individual horse. There is a growing concern regarding increased resistance of parasites to our dewormers and excessive use of compounds administered to our animals.

The goal of targeted deworming is to maintain the clinical health of horses by indentifying individuals that require treatment in order to minimize overtreatment. It is important to look at the big picture, keeping in mind the environment, pasture sanitation and age/overall health of the horse. Total eradication of parasites from the herd is not practical or in most cases achievable. Our goal is to control the amount of parasites affecting each individual while being vigilant of each herd scenario. Parasite control should be at the core of your horse's herd health management due to the fact that intestinal parasites can cause health problems and economic losses in your equine herd.

Different parasites affect horses at different points in their life. For example, ascarids (roundworms) are the most common parasites affecting foals while adult horses develop immunity to them. The most common class of parasites affecting adult horses is small strongyles (Cyathostomes). Other classes of equine gastrointestinal parasites include: tapeworms, bots, pinworms, stomach worms and large strongyles (not common). Clinical signs of parasite infestation include: weight loss, diarrhea, dull hair coat, stunted growth, nutrient malabsorption and colic.

There are two ways to achieve parasite control: rotational deworming of all horses on the premises simultaneously or targeted treatment of individual horses based on fecal egg count (FEC). According to studies, approximately 20% of the herd is responsible for shedding 80% of the parasite eggs. The FEC is a valuable tool used to determine the parasite load of each horse and to identify high shedders. Results are reported as the number of parasite eggs per gram (EPG) of feces. For proper collection and storage of a fecal sample, collect a fresh sample (2-3

fecal balls) within 12 hours of passage from the horse and store in the refrigerator in a plastic bag or container. FEC are performed in-house at the Equine Hospital with results reported the same day.

The common threshold used to initiate deworming treatment is 200-500 EPG on an individual horse. However, if your horse is showing clinical signs of parasite infestation in the face of low FEC s/he should be dewormed according to your veterinarian's recommendations. FEC can also be used to evaluate the response to deworming treatment in order to establish proper deworming intervals. Ideally, a second FEC should be performed 10-14 days after deworming to test the effectiveness of the product used.

There has been an increase in parasite drug resistance and unfortunately there are no new dewormers being developed. Groups of dewormers currently approved for use in horses include: Benzimidazoles (fenbendazole and oxibendazole), Pyrantel salts (pyrantel pamoate and pyrantel tartrate) and Macrocytic lactones (moxidectin and ivermectin). By deworming horses only when needed we avoid the unnecessary use of dewormers and decrease the chances of creating parasite drug resistance.



*Ascarid (roundworm) infestation as seen in the small intestine of a yearling colt at necropsy.*

Environmental and management factors should be taken in consideration as part of parasite control. Factors that increase the risk of parasite exposure include:

- **Overstocking:** more than 1 horse per 2 acres.

- **Poor pasture management:** sporadic mowing and scarce manure collection (less than twice a week) without pasture rotation.

- **Inadequate sanitation:** stalls and feeding areas should be cleaned daily and corrals and paddocks at least twice a week to prevent the horses from ingesting infective larvae.

- **Failure to treat parasitized horses:** horses are susceptible to small strongyles throughout their lifetime. Heavily parasitized horses will constantly contaminate the premises thus maintaining the parasite population. In a population of horses, approximately 20% of the horses will shed 80% of the eggs.

- **Failure to isolate and quarantine at-risk populations:** age plays an important part in parasite susceptibility making young horses more at risk. Yearlings should graze separately from older horses. Incoming horses with unknown parasite load should be separated from resident horses until FEC are performed and dewormer is administered if warranted.

- **Suboptimal dewormer dosing:** under dosing encourages selection for resistance. The most common reason is underestimation of the horse's weight. Use a weight tape or scale to estimate your horse's weight for more accurate dosing.

The idea of not wanting to completely eradicate parasites from our horses can be difficult to grasp. For years we have recommended deworming every 8 weeks and aimed at total eradication of parasite eggs. Inappropriate management practices and indiscriminate use of products has left us with resistant parasite populations and a better understanding of parasite control. We are not advocating a decrease in deworming practices or an acceptance of parasites in our horses, but a more targeted approach to control the number of parasite eggs accompanied by aggressive management practices to decrease the parasite population in the herd. Fecal egg counts are a valuable diagnostic tool that will help us keep horses healthy and avoid indiscriminate use of dewormers to decrease the occurrence of parasite drug resistance. For more information on parasite control contact your veterinarian.

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**EAGLE FERN EQUINE HOSPITAL**  
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***Tying-Up***

Tying-up can be an equine emergency encountered while trail riding or following any exercise. This muscle condition can be secondary to dehydration, overexertion, Polysaccharide Storage Myopathy (PSSM) or simply lack of conditioning. Common clinical signs include: muscle tremors, stiffness, muscle pain, excessive sweating, reluctance to move and/or signs of generalized pain. In severe cases the muscle cells will breakdown releasing myoglobin giving the urine a coffee to dark red color. This, in combination with dehydration, can lead to kidney failure if left untreated. Some of these symptoms can look similar to a colicky horse making people think that walking the horse will help, but it will actually make it worse. More exercise will lead to more muscle damage and worse prognosis. If you suspect that your horse is suffering from tying-up *do not walk* him/her and contact your veterinarian immediately.



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***Clinic News***

Our vet tech, Kelby Myers, is currently attending a three-week externship at Equine Sports Medicine & Surgery in Weatherford, Texas before heading back to Corvallis to begin her second year of Vet School at Oregon State.

Dr. Rosario and Kelby will be attending the 2010 Alltech FEI World Equestrian Games Veterinary Sport Horse Symposium in Lexington, Kentucky at the end of September. Topics to be covered include what's new in: orthopedics, nutrition, upper respiratory, podiatry, muscle diseases and imaging and the musculoskeletal system.

Visit our **new** website at  
[www.eaglefernequine.com](http://www.eaglefernequine.com)

**Clinic Hours:**  
Monday-Friday 8:00 AM—6:00 PM  
Saturday 8:00 AM—5:00 PM  
24 hour emergency service 7 days a week.  
After hours call (503) 721-4384.

***Equine Lameness Seminar***  
***Saturday, September 18, 2010***  
***6:30 PM at the Equine Hospital***

***Presented by Dr. Shakyra Rosario***  
***Second in a Series on Lameness***  
***"From the Ground Up"***

***Topics to be covered include:***  
***The Pastern & Fetlock***



*Please RSVP to (503) 630-4558  
Coffee and dessert will be provided.*

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PERMIT NO. 17  
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PRESORTED STANDARD

***Client Appreciation Day & Open House***

Saturday, August 28th, 2010  
From Noon to 4:00 PM  
Come and join us for fun & refreshments!