

Detection of parasites in horses

Horse owners can use parasite detection methods such as Faecal Worm Egg Counts (FWEC) and the saliva test for Tapeworm to implement a targeted worming programme.

A Tapeworm burden in the horse can cause a number of health-related problems, ranging from loss of condition to diarrhoea and colic. An infected horse has been shown to be 26 times more likely to develop ileal impaction colic than a non-infected horse, and eight times more likely to experience spasmodic colic, (Proudman, 2003). Tapeworms are white, flattened, segmented worms which can grow up to 20cm in length. They are usually found at the junction of the small and large intestine in the horse and use suckers to attach themselves to the gut wall.

There are a number of different species of Roundworm which affect horses. The majority of adults live in the intestine, however the lifecycle of these worms involves the migration of larvae through other body systems including the blood vessels of the intestine and liver, where they can cause inflammation and obstruction of the blood vessels resulting in damage to the intestine. Part of the life cycle of the small redworm, is for the larvae to become encysted in the intestinal wall. When a fibrous, cocoon like, capsule forms around them. The encysted stage is a normal part of the life cycle, and under normal circumstances it does not cause a lot of problems to the horse. The exception is if the gut wall becomes full of these encysted larvae. Then it will interfere with absorption of nutrients. However, if the Larvae start developing again, and they all emerge at once this can cause severe problems for the horse, and even death. Typically occurring during the late winter / early spring, symptoms of infestation can include colic, ill thrift, and diarrhoea and weight loss.

Anthelmintics or wormers contain different active ingredients. Traditional Tapeworm control involves worming in Spring and Autumn using a wormer containing praziquantel or a double dose of a wormer containing pyrantel. It is important to note that not all wormers contain these active ingredients. Active ingredients which target roundworm include Ivermectin, Moxidectin and Fenbendazole. Resistance to certain types of wormers has become an increasing problem in horses, where one or more of the chemical groups used in equine wormers are no longer effective against some worm species. Research has found that using too low a dose of wormer, too frequent worming and unnecessary worming may speed up the development of resistance in worms, (Lloyd et al, 2000). A targeted worming approach, in which wormers are only used when the presence of worms is confirmed, should help to prevent overuse of the active ingredients.

Faecal Worm Egg Counts

Faecal Worm Egg Counts (FWEC) are used to identify horses with high round worm burdens. Horses with a FWEC of more than 200epg (eggs per gram of faeces) should be treated with an appropriate wormer. Those with lower FWECs do not require treatment, preventing the unnecessary and ineffective use of wormers and also saving money. However, Tapeworms cannot be detected by routine faecal egg counts.

Saliva Test

A test has been developed to test for Tapeworm in horses by measuring antibodies in saliva which are specific to Tapeworm, using a combination of laboratory tests (called ELISAs). If a horse has a borderline or moderate/high burden, then it is recommended that the horse is treated for Tapeworm. Data from Equisal, the company which carries out the test, has showed that approximately 12% of horses tested for Tapeworm have a burden that needs treatment. This finding suggests that a large number of horses (approximately 88%) are receiving routine Tapeworm treatment when they do not need it.

The test involves collecting saliva from the horse's mouth using a saliva swab and sending the sample to the testing company who will analyse the sample and report back on the findings with a recommendation whether treatment for Tapeworm is required.

Saliva Test Results from CAFRE

In Autumn 2016, the horses at CAFRE Enniskillen Campus, were tested for Parasites. There were 50 horses tested for roundworm using the Faecal Worm Egg Count and only 15 of those horses had to be treated with anthelmintics, which is equivalent 30%. Horses were also tested for Tapeworm, using the EquiSal test. Of the 52 horses tested for tapeworm, only 3 horses (6%) had a positive test and had to be treated against Tapeworm. These tests provide potential cost savings to horse owners as only horses that test positive need to be treated for a parasite burden. It also prevents the overuse of wormers which can lead to resistance in worms.



For further information on worming your horse, contact your Private Veterinary Practitioner or local AMTRA Suitably Qualified Person (SQP) in your local tack shop or feed store. SQP's are professionally qualified people who are entitled to supply certain veterinary medicines, including equine wormers in the UK under the Veterinary Medicines Regulations.

CAFRE are currently running an Equine Parasite Control Project and are asking horse owners to share their parasite testing results in order to obtain a data of the parasite burden of horses in Northern Ireland. For more information search for "Equine" on www.daera-ni.gov.uk

References

Lloyd S., Smith J., Connan R.M., Hatcher M.A., Hedges T.R., and Humphrey D.J., Jones A.C. (2000)

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