

WORM CONTROL AT THE GRASS ROOTS

Pasture management is an essential part of any worm control programme, and plays a vital role in ensuring the health and well being of your horse. Most life cycles of equine parasites involve a period of development outside the horse and on the pasture; with eggs produced by the adult worms in the horse's gut being passed out in the horse's dung. These eggs then develop into infective larvae on the pasture.

A single horse is capable of passing tens of thousands of small redworm eggs in its dung each day, with the majority of worm eggs in the horse's dung and larvae on the pasture being small redworm¹.

Because a horse is mainly infected by ingesting infective larvae as it grazes, reducing its exposure to infective larvae on the pasture is paramount.

Horses' grazing behaviour

The ways horses are kept dictate their feeding habits. Horses are fastidious feeders and prefer to eat young, immature plants and will graze some areas of a pasture down to the bare ground. In other parts of the pasture, plants are avoided and allowed to grow to maturity, which lessens palatability and nutrient availability. In addition, horses will not graze around droppings so pasture plants around dung are also mature and less palatable. A typical horse, weighing 450kg produces 5-12 pats or approx. 24kg of dung a day, that's 10 tonnes a year! As such up to 50% of grazing can be lost due to fouled areas, resulting in the characteristic "lawns" and "roughs" as well as an increase in weed infestation.

In the wild, horses are free to graze over very large areas so they can easily avoid eating from pasture that has been contaminated with potentially infective droppings. For domestic horses, however, grazing is often limited thereby increasing their exposure to infection; as such action is required to reduce the number of infective larvae on the pasture. This reduction of pasture contamination is achieved by a combination of worming and pasture management.

Pasture management

Pasture management involves a range of actions, including:

- not over stocking pastures, i.e. no more than 1-2 horses per acre, as horses lower down the pecking order will be forced to graze the "rough" pasture where worm burdens will be higher;
- grazing horses alongside sheep, goat or cattle since parasites that affect horses are host specific and cannot survive in other species, therefore any larvae eaten by sheep/goat/cattle are destroyed and so reducing worm larval contamination of the pasture. In addition sheep and cattle will help to improve pasture quality by eating the "rough" grass rejected by horses;
- dividing paddocks into smaller areas so they can be alternatively grazed and rested to reduce the pressure on the pasture, as well as making it easier to remove droppings
- resting pasture for at least 5 months, although a good idea is not always an option. Besides which worm larvae can live for many years both on pasture and in horses and so simply resting a pasture does not guarantee it will be worm free;
- worming horses 48 hours before moving to new pasture;
- not turning out young stock onto small turn out paddocks as pasture will develop extremely high larval counts particularly if droppings are not removed each day;
- avoiding grazing foals alongside older horses, as foals are a major source of pasture contamination;
- only harrow in very dry conditions, as in damp conditions harrowing simply spreads worm eggs and larvae over the pasture and so increasing the risk of being ingested by horses; and
- most importantly regularly removing dung at least twice weekly during the grazing season, and once a week between November and March.

The impact of the climate

Climate changes have also had an effect on pasture contamination. Although harsh frosts (and hot dry conditions) will kill infective larvae on the pasture, the milder and wetter climate now experienced in the UK has meant high levels of infective larvae can occur on the pasture at any time of year². Thus there is an increased likelihood of grazing animals acquiring parasite burdens throughout the year. Therefore if the autumn and winter remain mild and wet the twice-weekly removal of dung will be necessary all year round.

The role of worming in reducing pasture contamination

In addition to pasture management, worming as previously mentioned also reduces pasture contamination. Besides from the fact that the main reason we worm our horse is to keep it healthy; worming kills the adult worms in the horse's gut and so the number of eggs that appear in its droppings are reduced. Also a feature unique to EQUEST, containing the active ingredient moxidectin, is that any small redworm larvae eaten by the horse as it grazes are killed for a further two weeks after having been dosed with EQUEST, thereby cleaning the pasture of this parasite and so reducing horse's exposure to re-infection.

By a combination of worming and pasture management, a horse's exposure to infection while it grazes can be reduced, thereby helping to ensure its health and welfare.

1. Mair TW et al 1990 Veterinary Record 126, 479.

2. Love S. Vet Clin. Equine 19 (2003) 791-806