

WORMING HORSES

Overseas there is a wide range of internal parasites affecting different organs within the horse. However lab results at the Dept. of Agriculture suggest that there are only the following worms in the Falklands:

1. **Large strongyles (*Strongylus* spp.)**. Infest the large intestine. These are migratory, their larvae passing through the lining of blood vessels, liver and pancreas, depending on species. They cause damage to and inflammation of intestinal arteries, a common cause of colic, and can result in death. Larvae overwinter in pasture.
2. **Small strongyles**, also known as Cyathostomes or redworms. Infest the large intestine. Can be of major clinical significance. Non migratory, but larvae encyst and hibernate in the intestinal lining. Need specific wormers (see 'strategic dosing'). Mass emergence in late winter/spring can cause colic, severe diarrhea, and death, and heavily contaminate pastures.
3. ***Parascaris equorum*** (Ascarids). Infest the small intestine. A problem of foals. Large numbers have been associated with ill thrift and occasional death. Larvae migrate through lungs so signs of early infestation may include coughing/wheezing. Foals develop good immunity through exposure, but worming at 4 and 12 weeks of age advised to prevent overburden. Eggs resistant in pasture for up to 5 years, so not rearing foals on same pasture year after year provides good control.
4. ***Oxyuris equi*** or pinworm. Large intestine. A non-pathogenic worm, although causes tail rubbing.

Unlike the UK and Europe there are no bots in the Falklands. Tapeworm – of relatively low pathogenic importance although cases of intestinal obstruction have been recorded – does not appear to be present. However, as the latter is more of an unknown, occasional dosing may be advisable (see below for specific wormers).

Control measures:

A combination of:

1. Pasture management.
 2. Faecal worm egg counts.
 3. Anthelmintics.
1. Pasture management. All or some of these measures will reduce worm burden.
 - (a) Paddock rotation. Either complete annual rotation, or avoid previous year's horse paddock until end of December – overwintered pasture larvae die rapidly through spring and are dead by mid-summer.
 - (b) Grazing with sheep and/or cattle. Equine worms are harmless to these species, so act as hoovers. Use either as part of rotation to crop last

year's horse paddock, or for mixed grazing with horses to dilute worm burden.

- (c) Graze foals and nursing mares on 'clean' pasture.
 - (d) Remove dung at least twice weekly (mainly heavily used paddocks).
 - (e) In extreme cases, plough and reseed heavily infested paddocks.
2. Faecal worm egg counts (WEC). Used to detect anthelmintic resistance especially to Group 2 wormers, the benzimidazoles (see table), and to monitor level of local worm burden. Can adjust worming programme accordingly; helps reduce anthelmintic usage and development of resistance. Heavy grazing – perform WEC approximately 3 months after spring worming on about 20% of horses. Possibly repeat after worming again in the autumn (which should be a wormer which includes redworms). Extensive grazing – try to perform WEC on 10% twice annually. Faecal samples to be collected fresh and sent to Dept. of Agriculture ASAP.
3. Anthelmintics. Of all the wormers available there are just three drug groups (see table). Check the small print drug name, not the large print commercial name. Each group has different duration of activity and a different action. Tailor worming programme to circumstances: extensive grazing, worm in spring and autumn (latter using redworm anthelmintic – see table), and perhaps another occasion in between. Include occasional tapewormer (Group 1 wormer at double dose or combination wormer Equimax, done at spring or autumn worming). Monitor with WECs. Intensive grazing, especially multiple owners/communal grazing, may require more thorough worming regime. Note that pasture threat continues over winter.

General principles of anthelmintic use:

- (a) Treat all new arrivals.
- (b) Treat all horses simultaneously using same wormer.
- (c) Rotate wormers from year to year not through the year (exception being strategic dosing for redworm/tapeworm). The 3 wormer groups give a 3 year rotation. However, WECs often sometimes prove local worm resistance to Group 2 wormers, in which case drop them and go to 2 year rotation.
- (d) In communal grazing conditions where (a), (b) and (c) are not applied, worm more frequently. Rough guide to duration of effectiveness is: Group 1, 4-6 weeks; Group 2, 6-8 weeks; Group 3 – ivermectin 8-10 weeks, moxidectin 13 weeks.
- (e) Strategic dose using specific wormer for redworm (annually) and tapeworm (at least occasionally) (see above).

Weight Formula:

It is important to dose for the correct weight. Underdosing helps build anthelmintic resistance. Weighbands can be useful, otherwise use this formula:

$$\text{Weight (kg)} = \frac{\text{Girth (inches)}^2 \times \text{Length (inches)}}{600}$$

Girth is measured just behind the elbow. Length is from point of shoulder to ischial tuberosity (tail head)

ANTHELMINTICS AVAILABLE AT FALKLAND FARMERS		
Product	Drug	Comments
GROUP 1 Pyratape P Strongid P	Pyrantel Pyrantel	Not as good for killing strongyles and oxyuris, but use in wormer rotation. Kills tapeworms at double dosage.
GROUP 2 Telmin Panacur Lincoln Horse & Pony	Mebendazole Fenbendazole Oxibendazole	Do not kill tapeworm. Kill redworm, but for dangerous encysted form need to use Panacur over 5 days (increase cost). Resistance does occur.
GROUP 3 Equest Equimax Noromectin Furexel Vectin Eqvalan Efaquel	Moxidectin Ivermectin Praziquantel Ivermectin Ivermectin Ivermectin Ivermectin Ivermectin	Do not kill tapeworm, with exception of combination wormer Equimax. Kill redworm. Moxidectin most effective as kills encysted inhibited form of redworm and lasts 13 weeks.