

SEBWAT parameter

(Standardised Equine-Based Welfare Assessment Tool)

Ectoparasites

Welfare issue

- Equine has bot fly eggs present on its body, which, if ingested cause gastro-intestinal worms to develop inside the body.
- The bot fly eggs stick to the animal's hair and are picked up whilst self-grooming.
- Therefore, common sites are areas easily accessible to the animal's mouth, such as the fore limbs and flanks.

Welfare significance

- Bot flies are generally considered to be less problematic than other internal parasites, however, their larvae can have an effect if present in sufficiently large numbers.
- Bot eggs are picked up in the mouth during self-grooming, and then hatch into first stage larvae, which burrow into the gums and tongue¹. This may cause irritation, which can affect feeding, and sometimes causes oral sores.
- If feeding is affected the animal may also start to lose condition.
- Pain from mouth sores may affect handling and bridling, in extreme cases making the animal reluctant to take the bit in its mouth.
- After doubling in size in the month (around one month), the larvae enter the interdental spaces of the upper molars² before migrating to the stomach for the second stage of development³. Once the larvae reach the stomach they burrow into the stomach wall which can cause lesions. This can cause discomfort or even colic, which could potentially have a detrimental effect on working ability⁴.
- Larvae in the stomach can affect the effectiveness of the digestive system leading to loss of condition, and occasionally cause stomach ulcers which maybe fatal if perforation of the stomach wall occurs⁵.
- After the larvae have completed the second stage of development (around 8 months) they migrate to the rectum to be passed out of the body with the animal's faeces, and complete the final stage of development in the soil. If excessively large numbers of larvae migrate out of the stomach at the same time this can potentially cause a blockage of the intestine, interfering with the passage of food and causing discomfort. Any impact on normal gut motility is a potential cause of colic.
- Occasionally the larvae can hook onto the lining of the rectum which can cause the animal to strain when passing faeces. This is uncomfortable and has been associated with rectal prolapse in some cases⁶.

^{1,3,4,5} Hayes (1992)

² Briggs (2004)

⁶ Brooke (2013)

Possible causation

- Bot flies lay eggs on the animal's hair, predominantly on the forelimbs, neck, chest and mane area. These can be seen as tiny yellow or white eggs stuck to the animal's hair.
- Poor grooming/attention to hygiene may mean that opportunities to remove bot eggs before the animal has chance to ingest them may be missed.
- Adult flies lay their eggs on the host's hair in late summer and autumn in temperate climates but have a longer season of activity in warmer climates. They are killed by frost. This means that owners should be vigilant in removing eggs when the flies are active.



Bot fly eggs on the coat.

Means of resolution

- Regular grooming and inspection of the animal's coat to find and remove the eggs.
 - Bot eggs can be removed carefully with a knife, a disposable razor, a very fine comb or by rubbing the eggs off with a rough stone. Care must be taken not to cause pain or injury to the animal when doing this. Eggs should not be picked off by hand as there is a chance they can remain and hatch under the finger-nails.
 - As the bot fly larvae are generally not a major welfare concern, the use of drugs such as ivermectin to treat bot flies may not be appropriate; prevention through removal of the eggs is preferable. However, in locations where winter temperatures are very low, the adult flies die, and the bot fly population is only sustained by the larvae over-wintering in the animals' intestines. Therefore, if broad spectrum anthelmintics are used to treat a range of internal parasites, including bots, then the local population of bot flies may also be reduced.
- Note that faecal worm egg counts should be used to identify when de-worming drugs should be used and which parasites should be targeted; the Brooke does not condone blanket de-worming.

Refer to the Working Equid Veterinary Manual, Community Engagement work plans or strategies and the Handling Guidelines before conducting an intervention.