



ENTFACT-504

HORSE BOTS

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Horse bots are honey bee-sized flies that dart around and glue their tiny eggs or nits to body hairs of horses, donkeys and mules. The fast movements of these flies frighten animals. Horses also can injure themselves as they attempt to relieve the irritation from burrowing activities of newly hatched bots. In addition, most of the larval or bot stage of the fly is spent as an internal parasite where it can cause serious problems.

Life Cycle

There are three species of horse bots. Their life cycles are very similar, except in where they attach their yellow to gray eggs to the host. Common horse bot eggs most often are attached to hairs on the fore legs but can be found on the outside of the legs, the mane and on the flanks. Throat bot eggs are attached to the long hairs beneath the jaws. Nose bot eggs are stuck to hairs on the upper and lower lips. It is easy to see how horses can be spooked by flies buzzing at these areas and may injure themselves or people working or riding them at the time. Depending on the species, females deposit from a few hundred to 1,000 eggs during their life time.

Eggs of the common horse bot hatch after a 2- to 5-day incubation period, often stimulated by warmth and moisture from the animal's tongue. Eggs of the other species may hatch without stimulation. Newly hatched bot larvae enter or are taken into the mouth. They spend about 3 weeks in soft tissue of the lips, gums, or tongue. The bots then migrate to the stomach or small intestine where they use sharp mouth hooks to attach to the lining of the organ. Bots can damage the lining of the stomach or small intestine, interfere with the passage of food, or cause other gastrointestinal disorders. They spend about 7 months there before passing out in the feces. The mature larvae enter the soil below the dung pile and pupate. In 2 weeks to 2 months, depending upon the season, they emerge as adults.

The adults do not have functional mouthparts so they cannot feed. Females go to horses only to lay their eggs. Most of the egg-laying is done during August and September but may continue until the first hard

frost.

Control

While bot flies may or may not be noticed around horses, it is easy to look for nits, or eggs, on the animal's coat. Virtually all horses in Kentucky are likely to be infested. Most of the pest life cycle occurs in the horse. Consequently, an insecticide, applied internally, is necessary to provide effective control. Check product labels carefully, all equine deworming drugs do not necessarily control horse bots. Before purchasing any product, read the pest list on the label and note any precautions regarding product use.

Trichlorfon, an organophosphate insecticide, is available by itself (Comboto) or included in some combination dewormers to provide bot control. No other organophosphate or cholinesterase inhibiting products, such as those containing dichlorvos (Vapona), coumaphos (Co-Ral), or tetrachlorvinphos (Rabon) should be applied to horses at the same time, or within several days of treatment. The product label will give specific restrictions. Ivermectrin, the active ingredient in products such as Eqvalan, Zimectrin, and Protectin 1, controls bots and other internal parasites and is not a cholinesterase inhibitor. No supplementary bot control material is needed when using products that have ivermectin as the active ingredient.

Consult your veterinarian about an appropriate parasite control program.

Alternatives

Clipping hairs that harbor eggs is not a practical solution for these pests. Sponging areas of the fore legs where nits are attached with warm water (110 to 112 F) may stimulate some eggs to hatch and the small larvae can then be washed off. This is of limited value and would have to be repeated frequently because new eggs are attached daily while flies are most active.

Bots and Humans

On rare occasions, bots can invade the oral tissue of humans. The small larvae may burrow behind the lips

or inner cheek and cause an uncomfortable sensation. They are unable to develop in humans so the small larvae will die within a few days. For example, rubbing or petting an area where bot eggs are attached can result in larvae on the hands and subsequent transfer to the person's mouth.