

Horse Bots

1997-98

Cooperative Extension Service
College of Agriculture and
Home Economics



Guide B-705

L.M. English, Extension Entomologist
R.L. Byford, Professor, EPPWS
M.E. Craig, Sr. Research Assistant, EPPWS

This publication is scheduled to be updated and reissued 9/02.

Three types of horse bots are found in New Mexico: the common horse bot or nit fly, *Gastrophilus intestinalis*; the throat bot or chin fly, *G. nasalis*; and the nose bot or nose fly, *G. hemorrhoidalis*. The adults of these flies resemble small honeybees.

The adult horse bot fly attaches its eggs to horse hairs, principally on the forelegs, but occasionally inside the knees, on the belly, shoulders, and fetlocks. The throat bot adult attaches its eggs to hairs beneath the jaws, while the nose bot fly deposits its eggs on the short hairs of the lips. The incubation period is usually short; however, hatching may be delayed by cold weather and viable eggs may be found on horses long after the adults have disappeared. Larvae of the nit fly emerge directly from the egg case into the lips of the horse when he bites himself; other species hatch directly and larvae migrate unassisted to the mouth. Larvae of the nit fly parasitize the tissue of the lips and gums before passing into and attaching to the stomach; other species migrate directly to the stomach.

In the stomach, larvae remain attached and feed on the lining for about 10 months. They are then passed in the feces as full-grown larvae. After the larvae reach the ground, they pupate in the soil. Adults emerge from the pupae, starting the cycle again. This process generally takes one full year.

The bot fly does not sting the horse, however, the fly's presence annoys the horse, and the eggs may cause a tickling sensation that irritates the animal. The larval stage is the most damaging to the horse. While small larval populations generally produce little damage, high populations take nutrients from both the stomach lining and its contents, producing unthrifty horses with lowered vitality, and resulting in emaciation and reduced work capacity. Severely infested animals will show signs of digestive upsets and colic. Serious consequences are possible if bot populations become dense enough to block the passage from the stomach to the intestine. Bots can also stimulate secondary infections of the stomach lining. Death can occur in the unusual event where bot feeding activities cause stomach rupture.

CONTROL

Most horses in New Mexico become infected with bots annually, and bot control is an essential part of good management. Horse bots can be controlled effectively by a combination of environmental management techniques and a general parasite control program. Ideally, bot control programs should begin about 30 days after all eggs have hatched. Mid-October is the earliest horses should be treated in most areas of New Mexico. Because bots can cause significant damage to horses, October-November treatment should be considered essential to an overall parasite control program.

It is impossible to control horse parasites without good paddock and stable management techniques.

TECHNIQUES FOR GENERAL PARASITE CONTROL

- Manage manure. Keep stalls clean and compost manure.
- Do not spread manure where horses graze.
- Prevent manure from contaminating feed and water.
- Control flies.
- When possible avoid using lowland pastures or poorly drained pastures.
- Separate older horses from younger horses as soon after weaning as possible.
- Till paddock areas to expose parasites to the environment.

DESIGNING AND IMPLEMENTING A DRUG TREATMENT PROGRAM

Factors such as environment, health of the horses, and the parasites common in your area should be considered in planning a drug treatment program for horses. To enhance the effectiveness of such a program:

- Include all horses on the premises in a parasite control program.
- Isolate and treat newly acquired or transient animals before they are allowed to come in contact with resident animals.
- Reserve an appropriate time for parasite control measures. Regular, well-timed treatment is imperative.
- Minimize parasite infections in foals by treating brood mares regularly.
- Make good laboratory examinations of manure samples periodically to assure the effectiveness of the drug program.
- Read and understand the label on the parasite control agent before materials are administered. Follow all label instructions closely and carefully.
- Alternate parasite control drugs to help delay development of resistant parasites.

RECOMMENDED ACTION FOR HORSE BOT CONTROL IN NEW MEXICO

INSECT AND TIME OF TREATMENT	INSECTICIDE AND DOSAGE	METHOD	COMMENTS
Bots (larvae in stomach)	Dichlorvos 17.5%	See labels or consult veterinarian.	Some are for use only by or upon order of licensed veterinarians; others may be administered by owner. Check product label restrictions on the particular product. Refer to specific label instructions. Do not treat colts less than 4 months old or mares in last month of pregnancy. Do not treat sick or debilitated horses. Do not treat horses to be used for food. Single oral dose in feed 1 month after killing frost. Do not repeat within 30 days.
	Ivermectin 1.87% oral paste	Paste	
	Trichlorfon 40%	Paste (or other)	
Bot eggs (Horse bot flies deposit eggs in late summer to frost)	Malathion 0.5%	Hand wash or mist in warm water	Warm water will stimulate the eggs to hatch and insecticide will kill newly hatched larvae. After first killing frost, wash front legs, under jaw, and chest with warm water only at air temperatures below 60°. Cool temperatures will kill newly hatched larvae.
	Coumaphos (Co-Ral) 0.06%	Hand wash or mist in warm water	
	Stirophos (Rabon) 6.5%	Hand wash or mist	

New Mexico State University is an equal opportunity/affirmative action employer and educator. NMSU and U.S. Department of Agriculture cooperating.

Revised September 1997

Las Cruces, NM