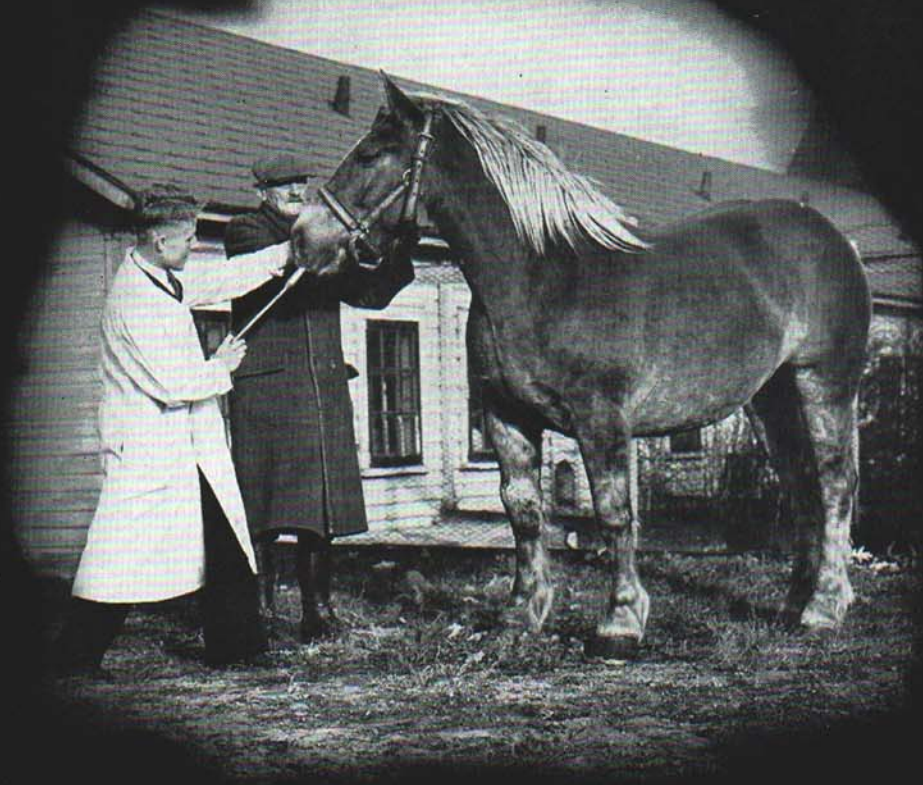


Controlling . . . **HORSE PARASITES**



MICHIGAN STATE COLLEGE :: EXTENSION DIVISION

EAST LANSING

Cooperative Extension Work in Agriculture and Home Economics, Extension Service,
Michigan State College and the U. S. Department of Agriculture Cooperating.

CONTROLLING HORSE PARASITES

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Parasites of various kinds acting in different ways are responsible for many farm animals failing to perform efficiently. This is particularly true of the horse. A horse which is annoyed by bot flies in the summer and compelled to share its feed with bots and other internal parasites during a large part of the year cannot perform to the best of its ability.

Internal parasites interfere with animals in four ways:

1. **Mechanically**, through actual injury or by blocking passages through which materials must pass.
2. **Nutritionally**, by obtaining their food from the organs in which they may be located or by absorbing nutriment from the contents of such organs.
3. **Introducing bacteria**, through permitting germs to enter the body of the host by way of injuries produced.
4. **Eliminating toxic or poisonous substances**, which, if absorbed, may do great damage.

A heavy infestation with parasites often causes an animal to appear unthrifty even though it may consistently consume large quantities of feed. Many colics of horses can be fairly charged to internal parasites. The ability of the blood to carry essential materials from one part of the body to another may be greatly reduced by the actions of parasites. In short, the disorders produced by parasites are many. Some animals may appear to tolerate parasites, but such animals may be dangerous spreaders of parasites and should not be ignored in any control effort.

The complete elimination of all horse parasites cannot be expected under actual farm conditions, but attention is directed to two kinds of parasites which are harmful and which can be eliminated or at least controlled through one application of a proved remedy. These are the bot and round worm. These are the most common parasites found in Michigan horses; they are usually the largest, and it can safely be assumed that they ordinarily are responsible for most of the damages inflicted upon the horse by parasites. Ample evidence indicates that the average horse from which these parasites are eliminated will

Live longer

Produce more power

Have less colic

Thrive on less feed

And, be easier and safer to handle

There are three species of bot flies: the common bot fly, which lays its eggs chiefly on the forelegs; the chin fly, which deposits eggs

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in the region of the chin or underjaw; and the nose fly, which places its eggs on the hairs near the mouth. The life-cycles of these parasites are practically the same. All are characterized by bots, which spend the larger part of the year in the stomach or intestines. The best time to fight the bot is during the fall and winter when the parasite is located inside of the horse.

Horses are also bothered to a considerable extent by ascarids or intestinal round worms. These parasites spend most of their time in the intestines, but the life history shows that the eggs which are passed out must undergo certain changes outside of the animal body, and when these parasites are first taken in they migrate through the liver,

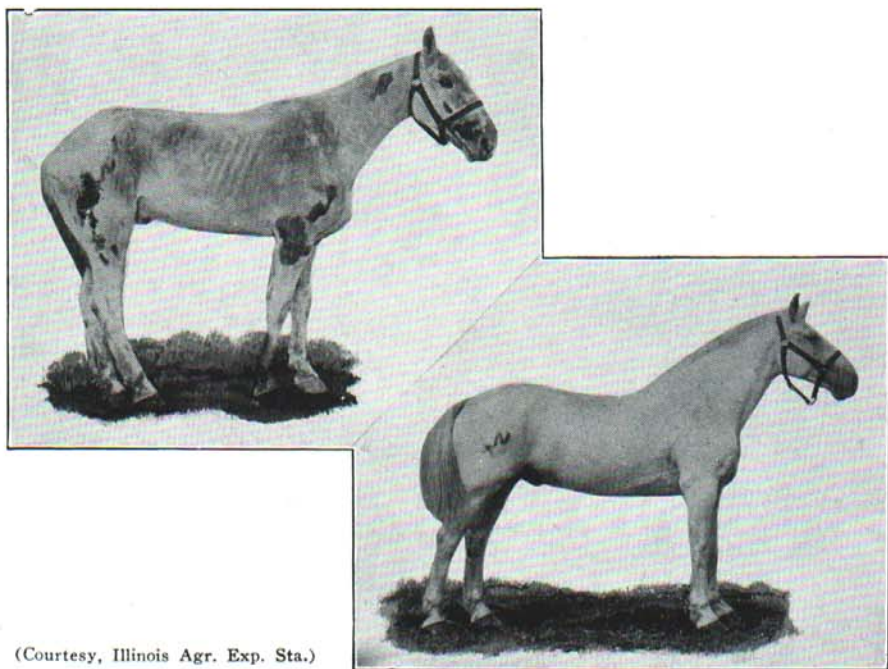
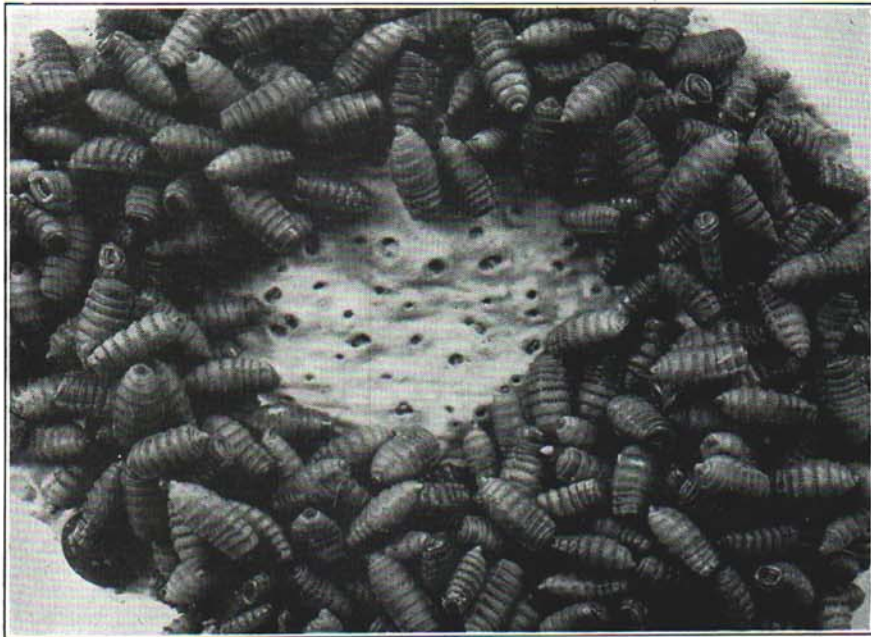


Fig. 1. Horse infested with internal parasites and same horse after proper treatment.

lungs, and other organs before returning to the intestines. Obviously, these parasites cannot be reached while they are migrating through the various organs, but the egg changes, necessary to the life-cycle, can be retarded by consistently placing the manure on the fields, and the round worms can be eliminated from the intestines by the same remedy that is used for removing the bots.

Round worms located in the intestines and bots in the stomach or intestines can be removed from the horse by one application of carbon disulphid if the treated animal is prepared in advance and the correct amount of the remedy is given in the proper way. Carbon disulphid is a foul-smelling, volatile compound which should be administered only by a qualified veterinarian who has been trained and is equipped to give the material in a safe and correct manner.

The adult bot fly goes out of existence with the killing frosts in the fall. From then on the life-cycle must be continued through the egg and the bot or larval stage. A 3 per cent solution (one ounce to a quart) of a good coal-tar dip in warm water will prevent hatching of the eggs. Hence, the first step toward practical bot control should be the application of the dip solution to the bot fly eggs which are firmly attached to the hairs of the head, forelegs, and other parts of the horse's body. Because of the interval between the hatching of the bot egg and the entrance of the bot into the stomach, 30 days should elapse between the egg treatment and the administration of the carbon disulphid.



(Courtesy U. S. D. A.)

Fig. 2. Cluster of bots in stomach of a horse. (Natural size.)

To insure best results, the horse should be prepared for the carbon disulphid. The preparation consists of keeping the horse from feed for about 18 hours just prior to treatment in order to minimize dilution of the remedy and to remove food materials that might serve to protect the parasites.

The cost of the treatment may be materially lowered if the work is done on a group basis—a number of farmers in one locality having the treatment applied on the same day. The grouping will also result in much better control of the bot. Close, well-organized grouping can result in the eradication of the bot from a community.

For further information, particularly about group work, apply to your veterinarian, county agricultural agent, or to the Department of Animal Pathology, Michigan State College, East Lansing.