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Screwworm Menace to Livestock

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The screwworm fly is a native of the tropics and breeds abundantly in the southern states. In recent years, it has also been found doing a great deal of damage to livestock in Missouri. While it does not survive our winters, each spring it may be carried north in wounds on livestock, where it continues to breed and spread from farm to farm during the summer months. Some summers, entire counties in Missouri have been overrun by this active fly, resulting in the death of many cattle, hogs, sheep, and other animals, as well as serious damage to others. Some seasons, this is by far the most destructive insect pest of farm animals where a severe local outbreak occurs, and we have also had several cases of attack on man.

Life History and Habits.—In the deep south the pest continues to breed all year. Maggots carried north in infested animals may mature and emerge as flies by early May. Thereafter, a new generation of the pest may mature every 15 to 30 days, and by fall a region may become very heavily infested by the pest.

The adult screwworm fly is blue-green with three darker stripes down the back. It closely resembles the medium sized greenbottle flies or blowflies, and is about twice the size of a house fly. Unlike common blowflies, however, it lays its eggs in fresh cuts and not on carrion or in festering wounds. Barbwire cuts, castration wounds, horn injuries, ringing and tusk injury on hogs, and similar fresh bloody wounds are all attractive to the pest for egg-laying. When the pest is threatening, all such wounds should be treated promptly.

The adult female may lay several hundred eggs and usually deposits them in lots of about 100 each. These hatch in a few hours and the small maggots at once enter the wound and begin to feed. As they feed and grow they penetrate deeper into the flesh, thus enlarging the wound and preventing it from healing, and if not treated severe cases usually result in the death of the animal. They closely resemble blowfly maggots, being an inch long when mature and tapering from a pointed head end to a broad posterior end. They may become full-grown in a week or less, after which they drop out of the wound. Then after entering the ground they change through a bean-shaped brown resting stage to the adult winged fly ready to attack wounds on other animals.

Control.—Here, as with most livestock pests, prevention is of the first importance. Each animal in livestock shipments from the south or southwest should be carefully checked to be sure that none have wounds infested with this maggot. The carcass of any animal dying from maggot attack should be buried promptly. As the summer advances, dairymen and livestock men should be careful to promptly treat all wounds whether or not this pest is known to be present in the neighborhood. Any wounds found infested with maggots should be treated promptly with a chemical to kill all the maggots, after which a repelling disinfectant should be used to prevent reinfestation.

Perhaps the best chemical for killing the maggots, everything considered, is benzol. Local druggists and veterinarians can usually supply this material. An oil can works very well for injecting the liquid deep into infested wounds after blood and pus have been swabbed out with cotton. Use the benzol liberally and plug the wound with a wad of cotton saturated with the solution. Then smear pine tar ointment over and around the wound to prevent reinfestation. Keep a close watch and if the wound continues to "run" retreat as you have probably not reached all the maggots deep in the wound. Chloroform or ether are sometimes used but they are more irritating and less effective. A combined screwworm killer and wound protector was recently developed by the Bureau of Entomology and Plant Quarantine known as formula No. 62. It can be prepared by dissolving 6 ounces of diphenylamine in 6 ounces of commercial benzol, which may require 24 hours, after which 2 ounces of neutral turkey red oil and 4 ounces of lamp black are stirred in to form a smooth mixture of about the thickness of molasses. This mixture can then be applied to the infested wound by means of a cheap paint brush. If properly prepared and applied, it will kill the maggots in the wound and then prevent reinfestation for a number of days, or frequently until the wound completely heals. Diphenylamine should be obtainable from the large drug or chemical companies in St. Louis and Kansas City.

If one will keep a close watch on his farm animals during the summer and fall months, and will treat all fresh and running wounds promptly, he can prevent serious loss from this pest. However, it is becoming a real threat in this state and each year more cases of attack are reported, both on livestock and on man himself. In recent years, a number of serious screwworm attacks on man have occurred in farm communities where farm animals have been severely attacked. Its attack on man usually occurs in the nose and throat and exposed cancers. The pest thus becomes a dangerous pest both of man and livestock.

Farmers and physicians are urged to report all cases of screwworm attack on livestock and man, and to send samples of the maggots to the University of Missouri College of Agriculture at Columbia.