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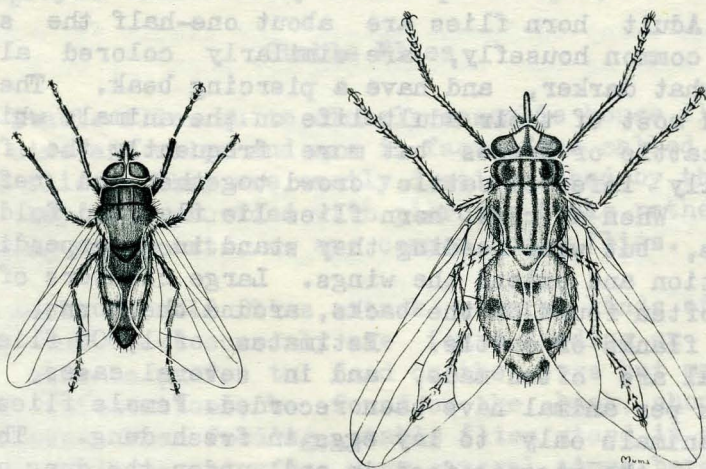
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Controlling Horn Flies and Stable Flies with D.D.T.



Cooperative Extension Work in Agriculture and Home Economics
University of Nebraska College of Agriculture, and the United States
Department of Agriculture cooperating, W. H. Brokaw, Director, Lincoln.

CONTROLLING HORN FLIES AND STABLE FLIES WITH DDT

Martin H. Muma, Extension Entomologist

The horn fly and stable fly are the two most important biting and bloodsucking flies that attack livestock in Nebraska. Their painful bites and bloodsucking habits cause irritation and loss of blood that result in reduced weight and milk flow. In the past, control of these two insects was quite difficult and except when the measures were applied thoroughly and continuously, results were often disappointing. The development of the new insecticide, DDT, has changed the outlook considerably. Simple, effective recommendations can now be made.

Horn Flies

Adult horn flies are about one-half the size of the common housefly, are similarly colored although somewhat darker, and have a piercing beak. The flies spend most of their adult life on the animals which may be cattle or horses but more frequently the former. Heavily infested cattle crowd together and refuse to eat. When at rest, horn flies lie flat and fold their wings, but when feeding they stand in a perpendicular position and extend the wings. Large clusters of flies are often found on the backs, around the horns, and on the flanks of cattle. Estimates of 1,000 flies per animal are often made, and in several cases, 10,000 flies per animal have been recorded. Female flies leave the animals only to lay eggs in fresh dung. The eggs hatch, the maggots feed in and under the dung and mature and change into adult flies in nine to twelve days. Adults live about seven weeks and breeding is continuous throughout the season.

Horn flies, due to their habit of riding on the cattle, are rather easily controlled with a water suspension spray containing $1/4$ per cent of wettable DDT.

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This dilution may be obtained by mixing four pounds of a 50 per cent wettable DDT powder in 100 gallons of water, or two ounces of the powder in three gallons of water. Practical control can be obtained for a period of two to three weeks by wetting the backs of the animals with this mixture. About one-half gallon of spray per animal is usually sufficient. Spraying should be started when the flies appear and continued throughout the fly season. Three or four treatments will give good control and the later sprays may be more widely spaced if the fly population is low.

The equipment necessary to make the applications of spray will depend largely on the size of the herd to be treated. Small herds, 100 animals or less, and dairy cattle may be sprayed individually with a three gallon compressed air sprayer or a wheelbarrow type sprayer. Larger herds may be moved into relatively large pens and sprayed collectively with a power sprayer.

Stable Flies

Stable flies quite closely resemble house flies in both size and color and are in fact often called biting house flies. They are easily distinguished by the fact that they are provided with piercing beaks rather than sponging mouthparts, as are common house flies.

Adult stable flies attack several kinds of livestock, but most commonly are found feeding on cattle. They seem to prefer to feed on the legs but may, on heavy infestations, be found on the back, shoulders, and flanks. When feeding, stable flies stand in a horizontal position and often move several times before becoming completely engorged. Stable flies do not rest on the animals, but after feeding two to five minutes fly to some object such as a fence, barn or even a bush to rest and digest the meal. Usually stable flies feed from one to three times a day and spend most of their time resting. Their eggs are laid in wet straw, mixtures of manure and straw, silage and other similar material.

The maggots hatch from the eggs in one to three days, mature in two to four weeks and change to pupae for one to three weeks before emerging as adult flies. On the average, 20 to 25 days are required to complete the cycle. Several generations are produced each year.

The characteristic feeding habits of stable flies make the problem of controlling them comparatively simple. Residual sprays containing 2 per cent wettable DDT, 34 pounds of a 50 per cent wettable DDT powder to 100 gallons of water, or one pound of the powder to three gallons of water, applied to the surfaces on which the stable flies rest will give excellent control. For practical purposes an application of DDT to the sheds will control flies for a period of six to twelve weeks. Sprays applied to outside walls, fences and the outside surfaces of feed bunks will decrease in effectiveness at the end of two to three weeks.

The spray equipment needed for stable fly control is the same as that recommended for horn fly work.

Other Flies

House flies and mosquitoes are controlled with the same sprays recommended for horn and stable flies. The large bloodsucking horse flies and deer flies apparently are not controlled by DDT.