UNIVERSITY OF ARKANSAS
DIVISION OF AGRICULTURE
Cooperative Extension Service

Livestock Insect Series

Horn Flies on Beef Cattle

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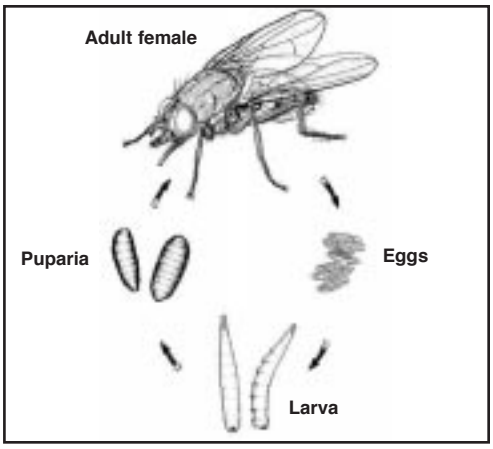
Economic Importance

The horn fly, *Haematobia irritans*, is widely distributed throughout the United States. The adult flies gather by the thousands around the horns, backs, shoulders and bellies of cattle, causing irritation and annoyance to the cattle. The presence of the flies causes loss of blood and reduced weight gains in beef cattle. The fly appears early in the spring and builds up to peak populations during mid- to late-summer and early fall in Arkansas. It generally is a pest of cattle, but sheep, goats, dogs and sometimes horses are attacked. When large number of flies are on cattle, the cattle bunch and spend most of the time fighting flies. They will stand in water or seek shade trying to get relief.

Life Cycle

The horn fly is about one-half the size of an ordinary housefly and possesses a piercing beak. The fly remains on the animal day and night and leaves only to pass to another host or lay eggs. Horn flies feed 20 times a day or more and are marked blood suckers.

The life cycle of the horn fly is relatively short. During the summer months, the flies reproduce in 9 to 12 days, and the adult flies live about seven weeks. The flies are adapted to a warm, moist climate; hot, dry weather or cold weather are unfavorable to their reproduction.



The adult horn fly leaves the animal only for brief periods to lay eggs. The manure apparently loses its attraction for egg-laying flies within 5 to 10 minutes after it has passed from the animal. The eggs are laid beneath the droppings where they hatch in approximately 16 to 20 hours. Low temperatures retard or arrest development of this stage. The larvae burrow into the droppings where they feed and grow, becoming mature in about four days. At this time the larvae migrate to the lower part of the droppings or into the soil to pupate and later emerge as adult flies. The pupal stage lasts about six to eight days and is also dependent on high temperatures and moisture for development.

When the fly emerges from its pupal case, it seeks the nearest animal and begins feeding. The horn fly may mate as early as the second day after emergence and may deposit eggs on the third day. An adult female horn fly is capable of laying 400 eggs during a lifetime.

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Control

Since the flies remain on the animal for long periods of time, control of the adult is simplified. The application of suitable insecticide throughout the horn fly season provides effective control. When economical, the spreading of fresh droppings to hasten drying also aids in disrupting the life cycle of the horn fly.

Reduced weight gain due to horn flies may be attributed to energy expended combatting flies, reduced food intake while combatting flies and to altered grazing behavior due to fly irritation.

A number of labor-saving self-treatment devices may be employed to control horn flies. Self-treatment commonly used includes backrubbers, oilers, dust bags and insecticide impregnated ear tags.

Backrubbers and Oilers

Backrubbers and oilers will provide good horn fly control if properly placed and maintained. Loafing areas around water sources or shade areas are often choice locations for positioning these self-treatments to encourage maximum usage.

Dust Bags

Control of horn fly populations can be achieved by the effective use of dust bags. Many good, durable bags are available commercially. Fly control with dust bags can be greatly enhanced by forcing animals to pass through dusting stations. A gate between a pasture and water source is a good example.

Insecticide Ear Tags

Many brands of insecticide impregnated ear tags are presently registered for and provide excellent horn fly control. Apply the tags as recommended by the manufacturer.

Resistance of flies to ear tags can become a problem if they are overused or not used properly. It is suggested that pyrethroid ear tags be alternated with organophosphate ear tags or other methods of control on a year-to-year schedule to be determined by the producer. Your county Extension office can provide more information on correct usage of ear tags to avoid onset of resistance.

Other Treatment Considerations

Several other methods of control may, under certain conditions, provide some horn fly control. Among these are oral larvicides and livestock sprays.

Future horn fly control may involve a multifaceted approach for managing the pest population. Knowledge is currently being accumulated on behavior, genetics, physiology and ecology of horn flies. Naturally occurring parasites, predators, fly attractants and feeding stimulants are known for the horn fly. Research being conducted at the University of Arkansas has shown that resistance to horn fly infestation is heritable in beef cattle.

For information concerning which insecticides to use and how to use them correctly for beef cattle external parasite control, contact your county Cooperative Extension Service office.

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