

IPM: Integrated Pest Management



Peggy K. Powell, Ph.D. Dr. Sam Barringer, DVM
Board Certified Entomologist Veterinarian

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Face Fly Biology and Management

Although the face fly, *Musca autumnalis*, is nonbiting, it is nonetheless a troublesome pest of cattle. The face fly's feeding activities, normally on secretions of the animal's eye and nose, often result in both annoyance to the animal and transmission of disease.

Identification

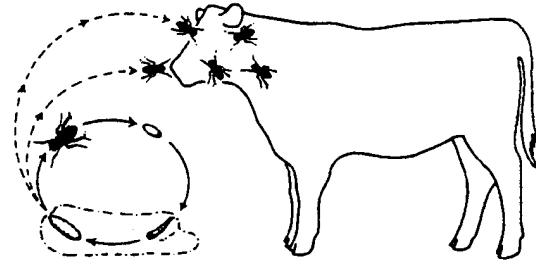
Face flies are 3/8-inch long, slightly larger than the house fly. A female face fly is slightly darker than a female house fly, but is otherwise almost identical. The male face fly's abdomen is orange with a black band down the center. The puparium or pupal case of the face fly is unusual in that it is white. An easy field identification characteristic is that face flies congregate in clusters of 20 to 100 on the faces of cattle.

Biology, Habits, and Life Cycle

Only the female face fly is a pest of livestock. Males spend their time perched on vegetation, awaiting mates. The males feed on plant nectar and on the liquid secretions of dung. Females feed on protein contained in eye secretions, nasal secretions, and saliva, not on blood. They feed only during the daytime, resting on fence posts or vegetation at night.

While the fly is feeding, the roughness of its sponging mouthparts irritates the cow's eye and increases tear production. Face fly feeding can transmit bacteria to the eye, increasing the likelihood of bovine pinkeye and *Thelazia* eyeworms.

In addition to feeding on facial secretions, face flies are sometimes facultative blood feeders. Facultative blood feeders don't bite cattle to obtain blood, however, they will feed on blood that oozes from scratches and other mechanical wounds.



The lifecycle of the face fly is about 14-21 days long.

The female face fly lays her eggs only in recently deposited (less than 15 minutes old) manure from grass-fed cattle. They do not lay eggs in manure piles around barns or in the trampled manure associated with feedlots.

Face fly larvae, or maggots, develop under the crust of the manure pat. When they reach maturity, they move into the soil next to the manure to complete their transformation to the pupal stage. The flies emerge as adults about one week later. Development from egg to adult requires about two to three weeks.

The face fly is active from early spring through late autumn. Face flies prefer bright sunlight and do not enter buildings during the summer. In the fall adult face flies often seek out hibernation places inside structures.

Economic Threshold

The treatment threshold for face flies is five flies per animal. A population of 12 to 14 flies per animal will result in a decrease in grazing by about one hour per day. Twenty to 200 flies per animal is considered a heavy population. Heavy face fly populations can cause

cattle to stop feeding and move into a shady location to escape the flies, resulting in reduced animal production. Dairy cattle will cluster together to reduce face fly attack, thereby increasing heat stress and reducing milk production.

Management Strategies

Face flies are more difficult to control than horn flies because they spend less time on the animals than do horn flies. One of the most effective control methods is dust bags placed where cattle are forced to use them, such as on a mineral feeder or gateway. The dust bag should be placed low enough so that the cow must lift it up with its head.

Cultural control methods, such as cleanup of barn and barnyard manure—used effectively against the house fly and the stable fly—are not effective in controlling the face fly because it breeds in fresh manure.

Walk-through fly traps designed for control of the horn fly (see TRIM page 10651) have been reported to occasionally trap face flies. In one study, between 2 and 13 percent of the flies caught in a walk-through trap were face flies. Research indicates, however, that

this method is not reliable for consistent suppression of the face fly population in a herd.

References

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