

Stable Fly

Stomoxys calcitrans

Photo Gallery



Stable flies are slightly smaller than house flies.



Stable flies have dark stripes on their back and a checkerboard-like pattern on the top of their abdomen.



Stable flies have a long, sharp proboscis. The bite feels like a stab by a pin in the skin.



OUCH! Stable fly acquiring its next meal.

Description:

The house fly and stable fly are similar in size, color and general appearance; they are often referred to as barnyard flies. On closer examination, these two flies are quite distinct in appearance, feeding habits and in the ways they annoy livestock, people, and pets.

A distinguishing feature, visible to the naked eye, that separates the two species is the distinct stiletto-like proboscis of the stable fly which extends forward beyond the head. This sharply pointed beak is used to pierce the skin and draw blood. The house fly cannot bite since it has sponging mouthparts.

Adults: Both male and female stable flies feed on blood and are persistent feeders that cause significant irritation to their host. Adults are 7 to 8 mm (1/4 inch) long and resemble house flies. A "checkerboard" appearance of the top of the abdomen and the stiletto-like proboscis will separate this species from adult house flies.

Eggs: Stable fly eggs are about 1 mm long and are an off-white color. Females deposit clusters of eggs containing up to 50 eggs. Several such clusters of eggs will be deposited during the life of a female fly and a single female can lay up to a thousand eggs during her lifetime.

Larvae: Stable fly larvae have a typical maggot shape. There are three larval stages. The last stage larva is about 10 mm long and is a cream white color.

Pupae: After the third stage larva completes feeding it shortens, hardens and darkens in color. The chestnut brown pupa is 6 to 7 mm long. Stable fly pupae are very similar in appearance to house fly pupae and are difficult to distinguish since, in their natural habitat, they are usually mixed with house fly pupae.

Life Cycle:

Stable flies will feed on blood from practically any warmblooded animal, including humans, pets and livestock. During periods of high stable fly activity, humans can be severely annoyed and this insect has been called "the biting house fly." Individual flies may feed more than once per day. Peaks of feeding activity commonly occur during the early morning and again in the late afternoon. Stable flies prefer feeding on lower parts of the hosts such as the legs. Both male and female stable flies feed on blood, and the female requires blood meals to produce viable eggs. Females deposit their eggs in a variety of decaying animal and plant wastes, but are rarely found in fresh manure. This fly prefers excrement mixed with straw, soil, silage or grain but are also found in wet straw, hay, grass clippings, other post harvest refuse and poorly managed compost piles. Large round hay or straw bales, where contacted by moist soil, may serve as larval development

sites. Larval development requires 11 to 21 days, depending on environmental conditions. Mature larvae then crawl to drier areas to pupate. The pupal period varies from six to 26 days depending on temperature. The entire life cycle from egg to adult is generally completed in three to six weeks.

Stable flies are active during the summertime in North Dakota and are the most important pests of dairy and feedlot cattle in the state. Stable flies prefer to feed outdoors and rarely are found feeding or resting indoors. These flies are strong fliers and dispersion from one livestock facility to the next is common. They remain active into October, but the larval development slows as autumn temperatures decrease. At temperatures near freezing, larvae survive and continue to develop slowly in habitats such as piled silage or manure where fermentation generates heat.

Comments:

Applications of residual insecticides to premises are frequently used to control both house and stable flies. Longer residual insecticides provide control for an extended period when sprayed onto sites where the adult flies congregate. Such places as fences, sides of buildings and inside and outside of animal stalls may be potential day or night resting sites for these flies. Observation of a barnyard situation will rapidly tell the favored resting sites for flies. Flies contact the insecticide when they land on the treated surfaces. Residual insecticides are effective because they control flies over an extended period of time and even will kill flies that emerge after treatment.

Knock-down sprays are effective in killing adult flies present at the time of application. The chemicals used for these applications are short residual insecticides having a quick knock-down and high contact toxicity. Several types of spray or fogging apparatus may be used for these applications. Wind velocities should be low at the time of application and the droplet or particle size should be small to ensure drift through the feedlot or dairy. This method requires less time for application but has the disadvantage that it will only kill flies present at application.

Other methods of fly control such as baits, electric grids and traps may have some limited use for house fly control but are ineffective for the blood-feeding stable fly.