



Livestock Pests¹

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External parasites, including lice, ticks, horn flies, house flies, stable flies, cattle grubs, horse flies, deer flies and mosquitoes present a serious problem to the beef and dairy industries of Florida. These pests are most prevalent during spring and summer months. In Florida's warm climate, however, many are a problem the year round.

Insecticides are available that will control most of the major external parasites of livestock when applied thoroughly and at the proper times.

Lice

Several kinds of lice attack livestock in Florida. Infested animals have a hair coat, with a rough, coarse appearance and do not reach maximum production or gain weight properly. They rub against posts, fences and trees, lick themselves and chew their tails (a sign of tail lice). Lice spend the entire life cycle on the host animals and are more prevalent during winter and spring. The best time to control lice is in the fall and winter.

Cattle Lice

Sucking lice, which feed on blood include:

- the long-nosed cattle louse (on head, neck and brisket),
- the short-nosed cattle louse (on head, neck and brisket),
- the blue louse (in rings on face, muzzle and around the eyes), and
- the cattle tail louse (discussed in a subsequent section).

One kind of biting louse, known as the cattle biting louse feeds on skin and hair, causing itching, irritation, and hair loss.

The cattle tail louse (Figure 1) is the most important damaging louse in Florida. In other parts of the United States the short-nosed cattle louse is the major pest. While much information is available for the control of the short-nosed cattle louse, only limited information is available specifically on control of the tail louse. Important differences in the biology of these two species require differing control strategies.

The cattle tail louse is a tropical louse species found in Florida as well as other Gulf Coast states. In 1945 the tail louse was introduced into Florida and

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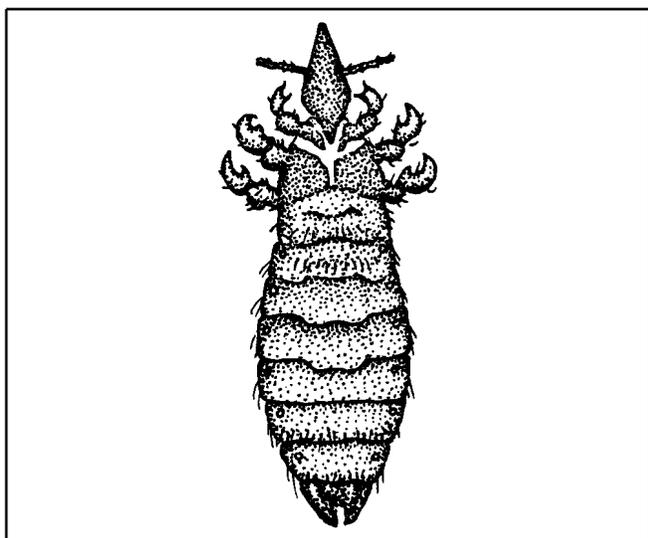


Figure 1. Cattle tail louse.

has since spread to be a serious cattle pest in the subtropical regions of the United States.

The cattle tail louse is the largest louse species found on cattle. Adult tail lice are normally found on the last 18 inches of tail and deposit eggs on the hairs of the brush. Occasionally when heavy infestations occur, adults and eggs may also be found in the ears.

The eggs which are laid on the tail hairs may hatch in 9 days when temperature conditions are optimal. In winter when temperatures are low the eggs may not hatch for 40 or more days. Thus, during January and February egg densities may build up on the tail brush. These eggs will remain on the hairs through the winter season to hatch when the temperatures begin to warm in the spring.

When the eggs hatch, the young nymphs migrate to the area of the eye, muzzle and vulva surface. They remain there to suck blood and grow through the second instar. The second instar nymphs may also be found around the neck region and mid-region. As the nymphs molt to the 3rd instar they migrate to the anal region of the animal to suck blood. Under optimal conditions the cattle tail lice will go through the entire life cycle (egg to egg) in as few as 25 days. Since the species has not been reared under laboratory conditions the number of eggs laid per female is not known.

Cattle tail lice may be carried into a herd by introduction of infested animals. Once an infestation

is in a herd, it may be spread by the direct contact of animals or by contact of areas where animals have scratched or rubbed.

The cattle tail louse may also be spread from animal to animal or herd to herd by flies. The third instar nymphs of the tail louse frequently migrate to the backs and shoulders of animals. There they can climb onto horn flies or other flies frequenting the animal to be carried to new hosts. One sample of 5000 flies taken from cattle were carrying 100 tail louse nymphs. Flies which frequent animals in a herd may play a significant role in the transmission of tail lice.

The tail louse is a blood sucking louse, and extensive infestations may cause anemia in cattle. Infested cattle show poor condition, slower weight gain, low vitality, and reduced milk production. Heavy infestations of sucking lice can cause abortion and anemia in animals.

Adult populations of more than 5 lice will cause economic damage to cattle.

Tail louse control can be readily achieved by timed treatments or self-treatment with proper insecticides. The first application should kill almost all the nymphs and adults present on the animal at the time of treatments. Retreatment is then required to kill all nymphs and adults which develop from eggs present during the first treatment. Since none of the labeled insecticides has good ovicidal properties, retreatment is essential.

Since cattle tail louse eggs can hatch up to 40 days after oviposition, treatments must be reapplied at 3 week intervals to attain good control. Continuous dust bag or backrubber treatment is the most successful control method.

Although tail lice may be present year-round, certain times of the year are preferable for treatment. From early spring to fall are good treatment times. Proper control procedures in the fall will prevent the winter build-up of eggs and subsequent damage when the nymphs emerge. Early spring application will control the damaging emergence of nymphs from the over-winter buildup of eggs as well as aiding in horn fly control. Mid-winter treatments are not

economically feasible since the population is generally in the egg stage and will not be killed by an insecticide application.

Late spring and summer applications for tail lice should be timed to obtain control of both flies and lice. Thus, optimum timing of proper pesticides can result in the control of more than one pest for the cost of controlling one species.

Hog Lice

Only one kind, known as the hog louse, is found on hogs. It does not attack other animals. Hog lice are found primarily on the inside of the upper part of the legs, in the folds of skin about the neck, and around the ears.

Horse and Mule Lice

The horse biting louse and the horse sucking louse attack these animals. Both kinds are most prevalent about the head, neck, withers and base of the tail.

Sheep and Goat Lice

Biting and sucking lice attack sheep and goats. The sheep "ked", a sucking, wingless fly may also be found on sheep.

Ticks

In Florida, ticks are principally pests of horses and cattle, especially range cattle. The most common are the Gulf Coast tick, lone star tick, blacklegged tick, spinose ear tick and cattle tick. Damage to cattle includes loss of blood, disease transmission, and tick paralysis.

Cattle Grubs

Two species of cattle grubs are present in the United States. One, the common cattle grub, is found in Florida. The other, the northern cattle grub, may be in cattle shipped to Florida from other states. Damage occurs from excessive running during heel fly season and direct penetration of the hides by the grubs.

Flies

Horn Flies

These pests are blood suckers that remain on animals except when laying eggs. They breed in fresh manure. Horn flies (Figure 2), which congregate primarily on the withers and backs, are more numerous on sick animals and on dark-colored animals. They may transmit animal diseases such as anaplasmosis.

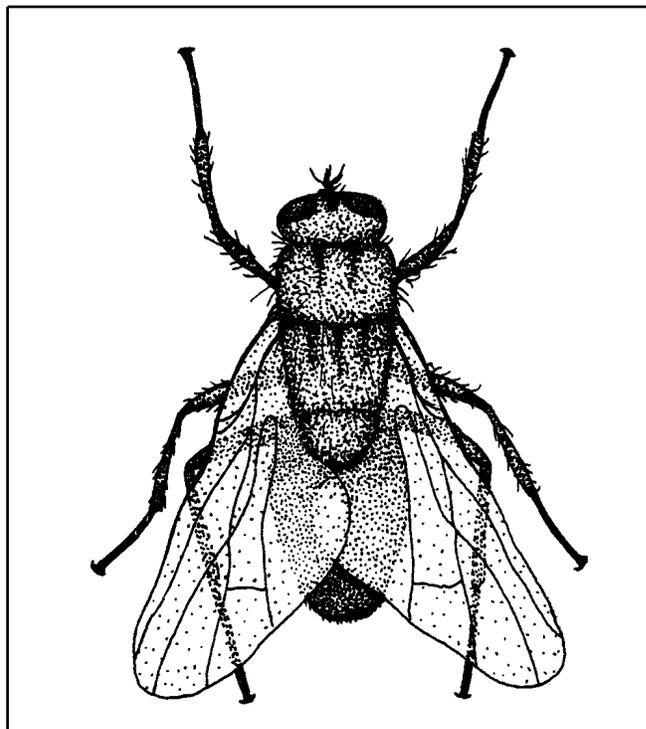


Figure 2. Horn fly.

Stable Flies

These insects are blood suckers with a severe bite. They breed in decaying organic matter, such as green chop, refuse, piles of fermenting straw, weeds, grass, peanut litter, refuse from packing sheds, citrus refuse, tomato refuse and celery strippings or wastes. In West Florida stable flies (Figure 3) breed in large numbers in piles of vegetation washed up along the shores of bays and lakes. Stable flies have the habit of congregating on the sides of buildings and on fences where residual sprays can be effectively applied.

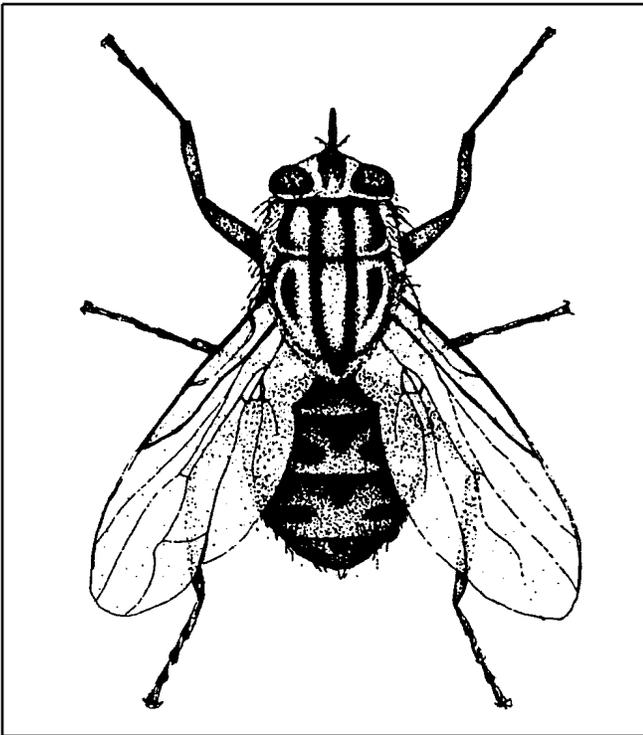


Figure 3. Stable fly.

House Flies

House flies (Figure 4) do not bite but annoy animals and may spread diseases. They breed in animal excrement and decaying vegetable matter. Sanitation, screens and insecticides are of major importance in house fly control. Since house flies have been able to develop resistance to most of the newer insecticides, there has been a renewed interest in sanitation for fly control programs. This means getting rid of the breeding places.

Horse Flies

About 188 species and subspecies of horse flies (Figure 5) are found in Florida. Thirty-five species occur in numbers high enough to be of direct economic importance to livestock. These blood-sucking insects are vicious biters that breed in wet areas. There is no practical control for these pests on beef or dairy animals. Both blood loss and disease transmission make these important livestock pests.

Screwworm Flies

Several kinds of maggots infest wounds of warm-blooded animals in Florida, but the one that

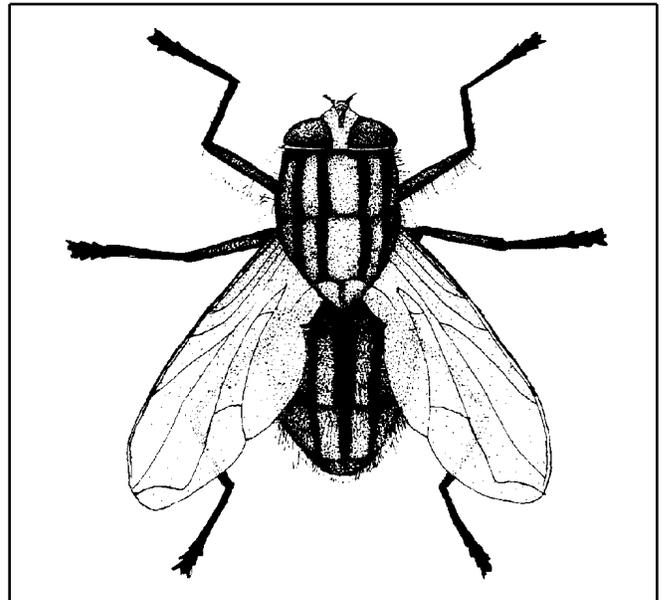


Figure 4. House fly.

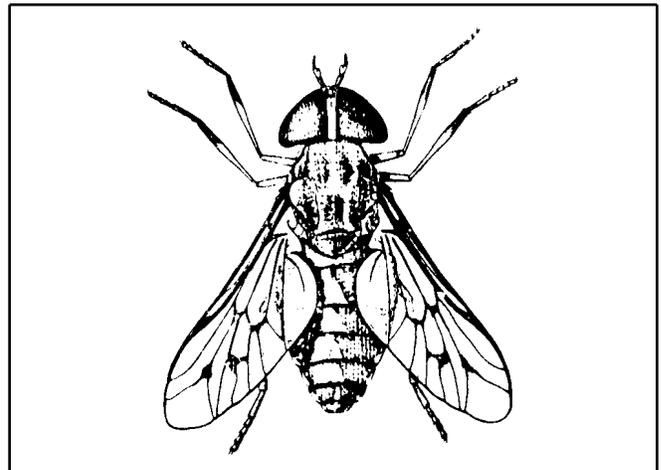


Figure 5. Horse fly.

feeds only on live flesh is the primary screwworm. The State of Florida and the United States Department of Agriculture, in cooperation with other southern states, have eradicated the screwworm from the United States and Mexico through mass releases of sterile male flies.

Of equal importance to the eradication of screwworm is the prevention of reinfestation. Since this pest will not normally migrate from the infested central American states into the southeast, inspection stations have been established along the Texas border to provide for thorough inspections and proper treatment of all animals moving from infested states in the United States. The screwworm is present in the Caribbean Islands, just off the Florida coast and presents a risk of reintroduction.

In Florida, the County Extension Director or Department of Agriculture Inspector should be notified promptly of any suspected screwworm case in livestock, pets, or wildlife. Make a record of the infestation and save samples of the eggs and maggots from the wounds. Place the specimens in a bottle or other small container filled with alcohol and take them to your County Extension office.

Mosquitoes

Several kinds of mosquitoes attack livestock. They must have water in which to breed. Mosquitoes (Figure 6) have piercing mouthparts and suck blood.

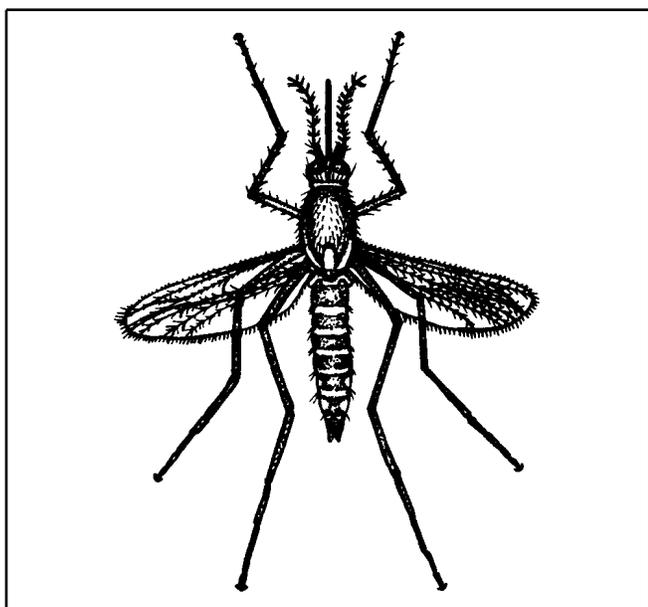


Figure 6. Mosquito.

Mites

Different species of mange and scab mites attack horses, swine, cattle, and sheep. Included are Psoroptes, Sarcoptes, Chorioptes and Demodex mites. These pests are too small to be seen with the naked eye. They are both burrowing and surface feeders causing mange lesions through severe skin irritations.