

Ozgenir Ozoghaner Gift

17/Sc107/1002

APH 304

15/02/2020

1. Entomological pest that affects the following livestock

- Poultry

• Darkling beetles, flies, moths, ~~attract~~ cockroaches, mites, lice, bedbugs, fleas, soft ticks and mosquitoes

- Pig

itch mite, hog louse, housefly, stable fly, mosquitoes, black flies, biting midges, dump flies, ~~vinegar~~ fly, ~~and~~ moth flies

- Cattle

Black fly, blow fly, bot fly, cattle grub (beetle fly), fleas, horn fly, deer fly, ticks, stable fly, and lice.

2. Other livestock that these insect attacks include

flies

This attacks all animals like cattle, pigs etc. It is controlled by preventing breeding by marking

Number 3

from each of the groups, pick out 3 insect and talk about their pestiferous life stages

Poultry

Cockroaches

The beginning of the pest life begins with an egg. From 3-7 days after mating, the female cockroach produces an egg. The egg is carried on the tip of the abdomen from a few hours to few days. After that, it is deposited in a hidden location and she uses her saliva to adhere the case to wherever she placed it. Under good conditions, the eggs will hatch and nymphs will emerge (usually 24-28 days). The nymphs start off white & very soft. As they grow, they undergo metamorphosis by shedding their exoskeleton

appearing more and more like adults after each molt. This molting happens irregular from ten to fifteen times until they become a full-grown adult cockroach. After their final molt, they reach their final lifecycle - the adult. They are equipped with wings and reproductive capabilities and are typically about 3 inches in length. They can live up to 1 year. The nymph feed on droppings of the mother for the first few meals after hatching before foraging for food. They eat things like bread, fruits, cloths, hairs etc.

Tick

~~The Ticks go through four life stages;~~

~~Eggs; - Six legged larva~~

Mosquito

Adult female lays her egg in areas that have a history of holding flooding water. The eggs are laid on the floor. When rain comes, the eggs become soaked and within 3-5 days, the ^{eggs} larvae will hatch into larvae within 48 hours of time. Water is the most mandatory part of their habitat. The larva stage, they breathe air through tubes that they poke above the surface of the water. They eat some part of floating organic matter and even each other. The larvae molt 4 times so they grow; after the fourth molt, they are called pupae. The pupa stage, it is a resting stage, non-feeding stage of development, but pupae are mobile. They respond to light changes & move with their tail towards the underneath or protective areas. When development is complete the pupal skin splits & the adult mosquito emerges. The newly emerged adult rest on the surface of the water for a short time to allow itself to dry all its body parts to solidify. The wings have to spread out & dry properly before it can fly. It starts feeding on livestock and man by sucking their blood after a couple of days & mating also starts.

Tick

A tick begins its life cycle as an egg. When the egg hatches, it ^{has} ~~is~~ with a 6-legged larva stage. Aside from its missing set of legs, the larva looks a lot like an adult. It just has to usually small mammals or a lizard. After feeding, the larva drops to the ground to digest its food and begin to grow. After one to three weeks, the larva molts and becomes nymph. A nymph has 8 legs and looks like a smaller version of an adult tick. It has to find another meal, usually from another small mammal, bird or lizard, before it can molt again. Once the nymph is finished eating, it drops to the ground to continue its development. After its final molt, the tick is an adult. The adult tick has one job - to reproduce. The female adult tick attaches itself to a host and feeds for more than 24 hours before mating. The male tick also feeds before mating. Once the male finishes mating, it dies and once the female lays her eggs (from 2,000 to 10,000 eggs), she dies.

Pigs

Itch mite

The entire life cycle of the mite occurs over 10-17 days. Newly mated females take ~~apex~~ an hour to burrow into the outer layers of human skin and excavate a tunnel. The mite lays her eggs singly depositing behind her 2-3 eggs each day. Females burrow without direction using their mouthparts to tunnel 0.5-5mm a day eating the skin and tissue fluids that ooze from their excavations. After 48 hours, the eggs hatch and the larval stage digs their way to the surface of the skin or they make use of hair follicles to moult to the next stage. Larval and nymphal stages remain in these moulting pockets feeding on fluids secreted from the follicles before moulting to the adult stage. Newly mated male & female construct short burrows less than 1mm before mating.

H Hog louse

The female louse lays nits (eggs) on the hair shaft. After 3-8 days the nits incubate and mature. At the 7th day, it hatches and forms nymphs. From day 8-17, the nymphs ~~eat~~ feed on the blood of the pig and grows and turns into adult lice. From day 18-27, after being fertilized, an adult female louse lays nits on the hair of the animal (egg) and after 28-32 days the louse completes its lifecycle and dies.

Biting midges

Females require a blood meal for development of eggs. Eggs are laid in a mass on various moist surface & hatch in 2-7 days. The eggs hatch into the larval stage which grows & develops in about 2 weeks to a year or more depending on the temperature and food supply. The pupal stage typically is formed in the same site as the last larval stage and adults emerge in 2-3 days. Adults can live for 2 to 7 weeks.

Cattle

Black fly

The female lays the eggs and the hatch in about 12 hours. Once ~~hatched~~ hatched, the larvae have unique hooks that allow them to stay on rocks or vegetation. The larvae feed on passing bacteria, algae & other small organic matter. As the larvae advances to the pupal stage, they become inactive so it is not necessary for them to feed. The pupa becomes an adult and floats to the surface of the water protected in an air bubble. soon after leaving the water, the females will seek blood so they can begin the lifecycle again. The average lifecycle of a black fly is about 3 weeks.

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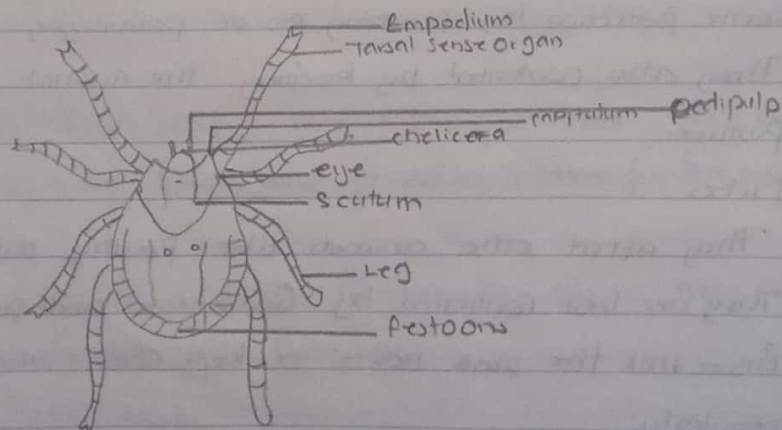
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Cattle grub

Female flies lay rows of whitish eggs glued to hairs on the host animals mostly around the head, legs and lower ^{part} of the belly. The larvae hatch from egg in 3-7 days and burrow under the skin. Over about a period of 6 months, the larvae migrate through the body to the animals back, developing through 3 stages. There each larva cuts a hole in the skin and places its breathing, breathing pores nearby. It remains there for another 2 months developing through 2 more larval stages. This is one generation per year. The larvae mature and squeeze out of the ground where they form a pupa. Then adult flies emerge in about 3 weeks.

Ham fly

The female lays all eggs to contribute to their ability to reproduce large number of flies. During her lifetime, a healthy well-fed female adult can lay about 400-500 eggs. They are laid on fresh cattle manure. The larvae hatch from eggs in about 1 day and feed on manure, passing through 3 larval stage in about 3-5 days. The pupa develop from larvae and it takes only about 3-5 days for pupae to develop into mature adults. Newly emerged adults mate on host and begins feeding. If no host is found, the adult can travel to search for a host.



Dorsal view of a tick

Number 2

Beetling pests

Darkling beetle

They attack other animals like grasscutter (rodents). They are controlled by using chemicals like tempo 1% dust, Tempo 20WP (liquid) etc.

Flies

They attack all livestock like pigs, cattle, goat etc. They are controlled by spraying insecticides.

Moths

They attack other livestock like cattle and pigs. They are mostly controlled by spraying pesticides.

Cockroaches

They attack other livestock like goat and pigs. They are controlled by keeping the environment neat and clean and also by the use of chemicals.

Black flies

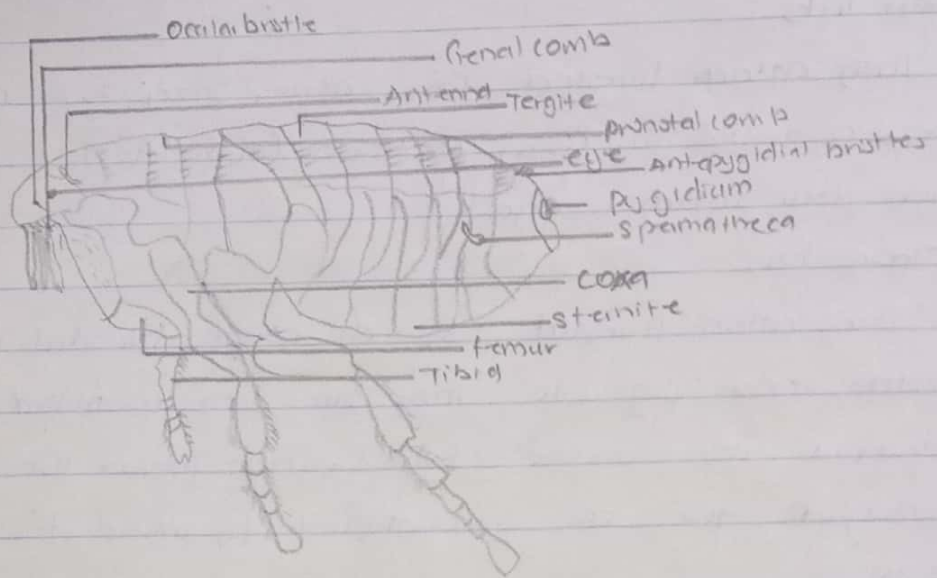
They also attack cattle, goat, pigs etc. They are controlled by using repellents especially those containing DEET. They are also controlled by attacking their larvae stage by destroying their habitat.

Biting midges

They attack animals like cattle, horses etc. They are also controlled effectively by using pastures. They are best controlled by providing shelter for the animals. Also biological control agents can offer some protection by feeding on or parasitizing the larvae and eggs. They are also controlled by keeping the animal away from infested pasture.

Mites

They affect other animals like poultry, cattle, dogs, etc. sheep etc. They are best controlled by Quarantine and proper control measures. Ensure that the pen house is kept clean and disinfected the house regularly.



A Diagram of a flea:

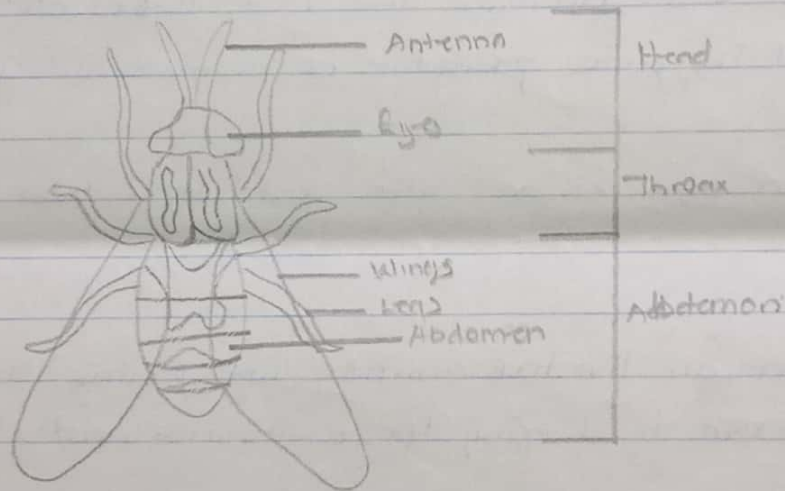


Diagram of a house fly

Number 2 (continued)

Flice

They also attack all livestock like pigs, cattle, sheep, goat.

They are controlled by using insecticides.

Bedbugs

They also attack animals like cattle, pigs etc. They are controlled by using insecticides.

fleas

They attack animals like cattle, pigs, goat, dogs etc. They are controlled by the use of chemicals.

Soft ticks

They attack livestock like cattle, sheep and goat. They are best controlled by using pesticides (acaricides) to kill the tick and their infectious agent.

Mosquitoes

They attack livestock like all warm-blooded vertebrates like cattle, goat, pigs etc. They are best controlled by eliminating stagnant water around which helps to prevent their breeding.

Biologically, they can be controlled by introduction of mosquito fish.

Itch mite

They affect other animals like goat, horses etc. They are best controlled by proper quarantine of animals and good sanitation.

Hog louse

They affect other animals like goat. It is best controlled by insecticides.

Housefly

They affect all livestock animals like poultry, sheep. They are best controlled by keeping the environment neat.

Stable fly

They affect livestock animals like pig, goat etc. They are best controlled by good sanitation.

Stable fly

They affect livestock like cattle. They are controlled by prevention of piling up dung or fecal matter and keeping the environment neat.

Vinegar flies

They attack livestock like goat. It is controlled by good sanitation.

Moth flies

They attack animals like cattle. It is controlled by spraying pesticides.

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Black fly

They attack animals like cattle, sheep and goat. They are controlled by using repellent especially those containing DEET. They are also controlled by attacking their ~~larva~~ larvae stage by destroying their habitat.

Blow fly

They attack other livestock like pig and goat. They are controlled by good sanitation and proper care of ~~the~~ sores (injuries) on ~~cattle~~ the livestock.

Bot fly

They attack other livestock like sheep. They are controlled by proper sanitation and the use of insecticides.

Cattle grub (heel fly)

They attack other animal like buffalo. They are controlled by the elimination of dung around the farms and proper sanitation.

Horn fly

They attack animals like buffalo, horse. They best control method is to use integrated control method by preventing breeding by making manure unavailable, kill adults and use screens or barriers.

Stable fly

They attack animals like buffalo and horses, pigs, goats etc. They are controlled by preventing breeding by making manure unavailable, kill adults before they can reproduce and exclude adult entrance by using screens.

Deer fly

They attack animals like horses, and other mammals. They are controlled by trapping using traps and providing shelter for the animal.

Ticks

They affect all domestic animals like poultry etc. They are controlled by using acaricide like diazinon.

lice

They affect all livestock like cattle, sheep and goat. They controlled

Controlled by host grooming, reducing crowding conditions, proper sanitation etc.

Mosquitoes

They attack all warm blooded vertebrates like pigs, goat etc.

They are best controlled by eliminating stagnant water around which helps to prevent their breeding.