

Ectoparasite of Poultry and Its Management

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A number of lice, mites, flea and ticks infect to birds and cause severe irritation which leads to loss of feathers, loss of weight and low numbers of eggs. Small ticks feed on the blood of birds and can carry germs which will cause other diseases. Other external parasites will hide in the walls, floors and bedding of the cages and houses where birds are kept. In order to control the parasites, it is necessary to keep these places clean and kill any parasites there.

Fleas, Mites, Lice infecting chickens

Fleas

Fleas are small and dark in colour and can jump high into the air. They feed on blood and can live without food for a long time. The eggs and young fleas are found in the birds' nests and cracks in walls and floors of buildings or chicken coop. One type of flea is found on the wattles and comb of chickens and does not jump away. Its bite causes ulcers to form and large numbers can kill young birds. They can bite people also.

Sticktight fleas

The Sticktight flea (*Echidnophaga gallinacea*) can usually be found on the skin and wattles of infested birds. Unlike many chicken-infesting mites, these fleas can survive and live on other animals, including dogs, cats, horses, and humans. Sticktight flea mating usually occurs on the bird. Female fleas lay eggs, which then drop to the floor or into the litter. The flea eggs hatch in a few days, and slender white larvae feed on debris in cracks and litter on the floor. The larvae spin cocoons and pupate. Adult fleas then emerge from the pupal cases. Sticktight flea's completes their life cycle in one to two months.

Mites

A number of different mites infect birds and cause irritation and loss of feathers. The scaly leg mite can cause lameness. Red mites can kill birds and will also bite people.



Northern fowl mites

The Northern fowl mite (*Ornithonyssus sylviarum*) is the most common external parasite found on poultry. It feeds on blood and can cause anemia if the poultry is heavily infested. The mite's development from egg to egg-laying adult takes about one week under optimum conditions cool months are more favorable than warm ones. Though adult mites do not lay eggs in large numbers, mite populations on a susceptible bird can exceed 20,000 in only a few weeks. Clinical signs of infestation include decreased egg production, growth rate, and feed consumption. Northern fowl mites also can bite humans causing itching and skin irritation. Northern fowl mites appear as tiny specks moving on the skin—they are found most commonly on the vent area of poultry.

Scaly leg mites

The Scaly-leg mite (*Knemidokoptes mutans*) is smaller than the northern fowl mite and lives under the scales on bird's legs and feet. They tunnel into the upper layers of skin where they lay their eggs. Signs of infestation include the bird's legs becoming thick and crusty. Severe cases may cut off the blood supply to the toes, and the bird may lose toes.

Chicken mites

The Chicken mite (*Dermanyssus gallinae*), also known as roost mites or red mites, commonly infest poultry and humans around the world. Unlike the northern fowl mite, it does not live on the bird and can be easily controlled by using an appropriate insecticide. The chicken mite is probably a greater problem in floor nests and on floor-housed birds. During the day, the chicken mite lives in secluded areas around poultry house or coop. At night, the mite crawls onto the bird and feeds on its blood. Infestations may go unnoticed unless birds are examined at night. The life cycle of the chicken mite is 7 to 14 days so, as with the northern fowl mite, heavy infestations can build up quickly if not controlled.

Lice
Chickens can be infected with a number of lice which suck blood and chew the skin. Ducks can also suffer from infections with lice. The parasites can attack all areas of the body and are found on the skin and feathers. Lice infections cause irritation and prevent birds from resting, sleeping and eating properly. The birds lose weight and egg production drops. Loss of feathers can occur in chickens. In ducks infection with lice can damage feathers so that the birds die from cold.

Poultry lice

The chicken body louse (*Menacanthus stramineus*) and the shaft louse (*Menopon gallinae*) are the species of lice most commonly found on poultry. Lice lay their eggs on the birds' feathers, typically near the base of the shaft. Infested birds may appear agitated because these lice irritate their skin. These birds will have damaged feathers and generally appear to be in poor health. These lice irritate birds by chewing the skin around the base of their feathers, but they do not suck blood as do mites. The constant



irritation these lice cause often leads to stressed birds. Poultry lice only leave an infested bird when moving to another bird. A female louse can lay as many as 60 eggs and the typical egg to adult cycle requires about 30 days. Clinical signs may also include reduced feed intake, slowed growth, and declining egg production.

Ticks infestation of chickens

Chickens can be attacked by the small, blue or brownish fowl tick. They live in cracks in walls or trees and can live for several years without feeding on the blood of a bird. The tick feeds at night and can cause egg laying to stop. It causes tick paralysis and spreads other infections.

The fowl tick, *Argas persicus*, is found worldwide in tropical and subtropical countries and is the vector of *Borrelia anserina* (avian spirochetosis) and the rickettsia *Aegyptianella pullorum*, which causes fowl disease (aegyptianellosis). In the USA, the *Argas persicus* complex has been divided to include *A. miniatus*, *A. sanchezi*, and *A. radiatus* in addition to *A. persicus*. These ticks are particularly active in poultry houses during warm, dry weather. All stages may be found hiding in cracks and crevices during the day. Larvae can be found on the birds because they remain attached and feed for 2–7 days. Nymphs and adults feed at night for 15–30 minutes. Nymphs feed and moult several times before reaching the adult stage. Adults feed repeatedly, most commonly under the wings, and the females lay as many as 500 eggs after each feeding. Adult females may live >4 years without a blood meal.

How to treat Infected bird

To control external parasites birds must be treated with a powder or spray containing, e.g., trichlorphon or malathion. The cages and houses must be thoroughly cleaned. Chickens will clean their feathers daily with soil or sand (a dust bath). A shallow box containing sand and ashes (left from a fire) will be used by birds and helps to keep the feathers clean and free of infections. A light dusting of a dusting powder will make the dust bath better. Scaly leg of chickens can be treated by dipping the leg in paraffin (kerosene) and then gently brushing the leg. Paraffin must not be allowed to touch the skin or feathers.

Cleaning cage and house

If birds are infected with external parasites, it will be necessary to thoroughly clean out cages and houses. All bedding and dirt must be removed and all parts of the equipment should be thoroughly scrubbed with soap and hot water. If possible, you should then spray or paint the equipment with a mixture of paraffin and creosote in equal amounts or with nicotine sulphate (40%). Your veterinary service will advise you on what is available locally for you to use. You can use a hand pump to spray houses. You can spray with a treatment for external parasites and your veterinary officer can advise you on this.

