Common External Parasites of Chickens

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Parasites
An organism that lives off another
Most animals and humans have them

Internal and External

Multi-species hosts or Species - specific
The parasitic relationship is usually good for the parasite detrimental to the host

Parasites or Symbiotes
Related to a parasite is a symbiote
An organism that lives with another
The symbiotic relationship is usually good or at worst neutral for both organisms.

Relationships of organisms of different species
Symbiosis
Neutralism
No apparent affect on either
Amensalism
One harms another with no benefit
Competition
Mutual determent
Commensalism
Benefit for one without effect to the other
Mutualism
Both benefit
Parasitism
Antagonism
One benefits at the expense of another

What are the common ectoparasites of Poultry?
Mites
Lice
Fleas
Ticks
Mites

Important Types
- Red Mites
- Northern Fowl Mites

Less Common
- Scaley Leg Mites
- Depluming Mites

Lice

- Fluff Louse
- Shaft Louse
- Head Louse

Life Cycles

- Chicken mite (*Dermanyssus gallinae*)
  - Roost Mites, Red Chicken Mite
  - Poultry problem Worldwide
  - Can feed on Humans
  - Nocturnal Feeders – Blood Suckers
  - Do not live on the birds
  - Spend days in cracks and crevices of the chicken house

- Northern fowl mites (*Ornithonyssus sylviarum*)
  - Most common parasite
  - Cooler Temperature
  - Blood feeders

Chicken mites

- Come from wild birds, rodents, other animals

- Heavy infestation – Reduced production and Fertility
- Listless birds
- Pale combs and wattles
- Reduced wt gain

Clinical Signs
- Anemia
- Loss of production
- Reduced Growth Rate
- Reduced feed intake
- Will bite humans - Itching

Northern fowl mites (*Ornithonyssus sylviarum*)

- Look for dark patches in the feathers and on the skin around the rear area, bite sites appear as fleshy, red or dark spots in the skin.
Scaly-leg mites (*Knemidokoptes mutans*)
- Very small, 1/100th inch
- Burrow under leg scales, feeding on the soft tissue
- Scales appear to erupt from the legs
- Birds may lose toes
- Can live off birds for a while
- Treatment – smother mites
  - Cover with oil or petrolatum

Poultry lice - Biting Lice
- *Chicken body louse* (*Menacanthus stramineus*)
- *Shaft louse* (*Menopon gallinae*)
  - Blood sucking lice – only on mammals
  - Species-specific and cannot survive on humans
- Remain on the birds – eggs attached to feathers
  - After hatching, remain for months
  - (survive off birds for only a few days)
- Feed on Skin dander, feather dander, scales
  - Will feed on surface blood

Infested birds
- Agitated because of skin irritation
- Damaged feathers
- Appear to be in general poor health
  - Reduced feed intake, slowed body growth
  - Decreased fertility, declining egg production
- Do not leave the host bird unless they are moving to another bird

Sticktight fleas (*Echidnophaga gallinacea*)
- Attach to the skin and wattles on the head of birds
- Not species specific –
  - Found on dogs, cats, horses, and humans
- Adults are free-living until it is time to breed
  - Female fleas attach to the skin around the face
  - Lay their eggs
- 4 weeks for an egg to develop into an adult

Less-Common Parasites
- Fowl ticks (*Argas persicus*)
- Blue bugs - soft tick

- Hard ticks are normally found on cats and dogs
- Adults are about 1/4 inch in length
- Ticks live in the cracks and crevices of a poultry house.
- Ticks in various stages of development will feed on a host. Females lay 50 to 100 eggs in a poultry house after every blood meal.
**Blue bugs (Ticks)**

Larvae seek out a host attach themselves and feed for 4 to 7 days.

Larvae then fall off the host molt to the nymph stage
Nymphs and adults feed only at night
15 to 30 minutes
After several nymphal molts, the adult tick emerges
The time from egg to adult is approximately 30 days
Adult ticks are resistant to starvation
Can live for more than a year without feeding

**Bedbugs (Cimex lectularius)**

Nocturnal

Bedbugs crawl onto birds and suck their blood

Bedbugs hide, breed, and lay eggs in the poultry house
in nests, behind nests, under loose boards, and in cracks

When disturbed, bed bugs give off a distinct odor similar to that of stink bugs

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**Treatments**

**Cleaning and Pesticides**

**Dusts, Sprays and Strips**
- Carbamates
- Permethrines
- Mite Strips

Poultry house, especially cracks and crevices, roosts, walls, and ceilings

The birds should also be treated with an insecticide that is approved for poultry. Following label instructions

**Garlic juice mixture.**

Poultry scientists in the UK to have a 100% kill rate over 24 hours.

Treatment and preventative

10 ounces of water
1 ounce of garlic juice
1 teaspoon [total] any combination of these essential oils – bay, cinnamon, clove, coriander, lavender, spearmint and/or thyme

Ectoparasites will be a constant problem
Elimination probably not possible
Control will continue to be a constant battle
The RED POULTRY MITE, Dermanyssus gallinae, is a small, red, oval-shaped mite that is commonly found in poultry houses. It is a specialist feeder, meaning it feeds exclusively on the blood of birds. The mite has a complex life cycle, involving eggs, nymphs, and adults. The eggs are laid in crevices and cracks in the poultry housing, where they hatch into nymphs. The nymphs then molt into adults, which can mate and lay eggs of their own. Once mature, they can reproduce, leading to a rapid increase in the mite population.

Mite populations in poultry housing grow very rapidly because the mites can survive for up to eight months without feeding. This means that even if the birds are removed from the housing, the mites can continue to reproduce, leading to a reinfestation when the birds return. The mites are also very resistant to cold temperatures, meaning they can survive in the winter months and emerge in the spring.

Mites can transmit diseases to birds, such as Newcastle Disease, fowl typhoid, and salmonella. They can also cause a range of symptoms, including feather loss, reduced egg production, and decreased fertility. In extreme cases, mite infestations can lead to the death of birds.

Effective treatment requires that the entire poultry house is treated, paying special attention to the areas where mites like to hide. This includes the roosting areas, nesting boxes, and feeding stations. A combination of insecticides and bird health management practices is often required to control mite infestations. It is important to choose an insecticide that is approved for use in poultry and to follow the manufacturer's instructions carefully.

In summary, mite infestations are a serious problem in poultry houses and can lead to significant economic losses. Early detection and effective treatment are crucial to minimize the impact of mite infestations on poultry health and production.