



Protecting Your Flocks from External Parasites – Mites and Lice

Shujuan Li and Jennifer Weber

External parasites, such as mites and poultry lice, are common pests on birds, especially in backyard chickens. They feed on the blood and bite skin, feathers, or scales of the bird. A heavy infestation of these pests can result in poor poultry health, reduced growth and egg production, and sometimes can even cause bird deaths. This article provides basic information on how to recognize the signs and symptoms of an infestation, and how to effectively treat infested birds.

Mites

Mites move slowly and are very small. They are 1 mm in diameter (size of a ground pepper) and therefore can only be seen by close visualization or through a magnifying glass.

There are two common mites found on the body of poultry, red mites (or chicken mites, primarily a warm weather pest, Figures 1 & 2) and Northern fowl mites (mostly a cool weather pest, Figure 1). Both are blood-sucking feeders. Chicken mites are red, black, or gray (Figure 2). Mites can live off the bird for 2-3 weeks and can complete one life cycle in 7-10 days under favorable conditions.



Figure 1. Northern fowl mite (L) and chicken mite nymph and adult (R). Image: University of Kentucky Entomology.

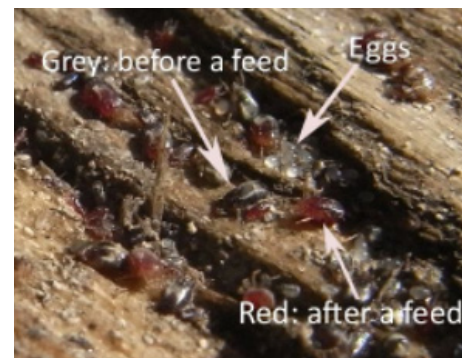


Figure 2. Close-up shot of chicken mites in a crack (L) on a chicken house. Photo: Keeping-chickens.me.uk

Poultry lice

Poultry lice are NOT the same as human lice. People can't contract lice from chickens. Poultry lice are tiny, wingless, flat-bodied insects with chewing mouthparts. They are yellowish and move quickly, and are often large enough (2-3 mm long, the size of a sesame seed) to be seen with the naked eye. Poultry lice feed on feather parts, dead skin, blood, and other debris. Lice can survive off the host for about one week. They can complete a life cycle in 4-5 weeks.

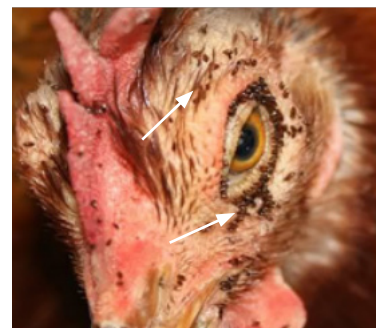


Figure 3. One of the many problems caused by chicken mites in chickens (R). Chicken mites are visible on this chicken's head. Photo: Yourchickens.co.uk

Flock symptoms

Flocks infested with mites (Figure 3) or poultry lice (Figure 4) will show similar symptoms, including weight loss, reduced egg production, decreased activity, bald spots, red and irritated skin, small scabs and clots, changes in appetite, ragged-looking or dull feathers, and increased susceptibility to diseases. If any of these symptoms are observed, a visual inspection for mites or lice is generally recommended. Carefully inspect birds around the ventral region (lower and abdominal surface) for signs of lice or mites. Infestations usually start in this area of a bird. See more details in Table 1. For more questions, please consult a veterinarian.



Figure 4. Poultry lice seen on chickens. Photos: Steve Golson (L) & Poultrykeeper.com (R)

Table 1. Comparison between chicken mites and poultry lice. This table was modified from the Yarmouth Veterinary Center - External Parasites of Poultry.

	Mites	Lice
Size	1 mm diameter (ground pepper)	2-3 mm long (sesame seed)
Moving speed	Slow	Fast
Location of eggs	Along feather shaft	Base of feather shaft
Best detection time	At night or during the day	During the day
Location	Live on host and in environment	Only live on host

How to effectively treat mites and poultry lice?

- Regularly (monthly or bi-monthly) inspect your flocks in order to identify and address these parasites before an infestation gets worse. Pay special attention to brooding hens, which tend to dust-bathe less frequently than usual, making them prone to parasites.

- Sanitation and cleanliness are key to mites and lice control. Sanitation includes cleaning and disinfecting housing facilities and equipment between flocks. Eliminating contact between flocks and wild birds can help reduce the potential transmission of parasites.
- Pesticides can be used to treat lice and mites. They are available as dusts, liquid sprays, and resin strips.
- When using pesticides to treat lice and mites in chickens, always read and carefully follow the label directions provided with the product. Make sure the product is labeled for use on poultry.
- DO NOT use products containing the active ingredient, "carbaryl." Carbaryl is a pesticide that affects the nervous system in animals. It was banned by EPA for use on poultry or other animals.
- Dusts can be difficult to apply and are easily inhaled. Follow label instructions, which might recommend a face mask to prevent inhalation and eye protection. It is suggested to put the bird in a canvas shopping bag with its head sticking out. Manipulate the bag to get the dust in the bird's feathers and around the vent (the opening where birds expel waste and from which they lay eggs).
- If using a pesticide spray, always prepare a fresh mixture and shake well before use. The spray should be applied directly to the birds. Make sure it reaches the skin.
- In order to control chicken mites, sprays will also need to be applied to birds' living area, such as litter, bedding, and building structures. This will help to kill mites that can survive off the birds and live in the environment.
- Chemical treatment should be repeated every 2 weeks, if needed. Carefully read pesticide labels to make sure withholding (nontreatment) periods are followed for food-producing poultry.
- Follow all label instructions, including listed withdrawal times for egg consumption or harvesting birds for meat. Withdrawal times begin after the last treatment has been given.
- Pesticide resin strips can be placed into chicken cages or nest boxes, which will provide a continuous control of lice and mites. Use pesticidal resin strips only during months when the expected number of lice and mites will be high. This might delay the development of pesticide resistance and preserve the effectiveness of the products.

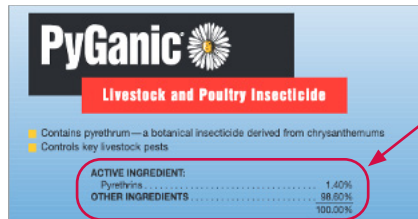
Read the label before you buy and apply the pesticide.

It is against the law to use these products off-label (in any manner inconsistent with the labeling) in food production animals without the supervision of a veterinarian.

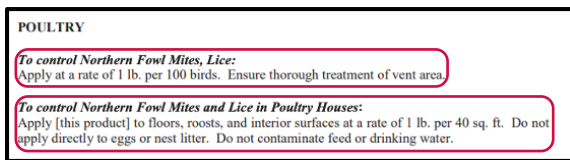


Search the label for the “Pest” you want to control.

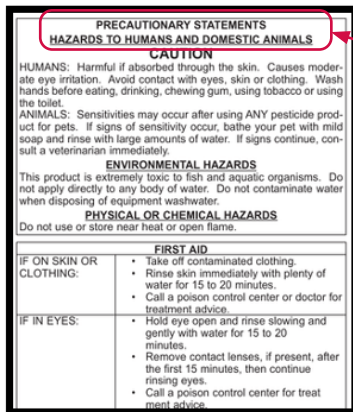
Make sure the label also states you can use it on “Poultry” or “Chickens.”



Review the “Active Ingredients” section to make sure the product doesn’t contain carbaryl.



Ask a store clerk, veterinarian, or the pesticide manufacturer for help if you don’t understand the product’s “Directions for Use.”



Finally, review the label for “Precautionary Statements” and additional details on how to prevent and respond to pesticide exposure.

Following these instructions can help to protect you, other people, animals and the environment when using the product.

References, further information

- Mccrea et al. 2005. Common lice and mites of poultry: identification and treatment, University of California.
- External Parasites of Poultry, Yarmouth Veterinary Center.
- Lice and Mites, McKillop Poultry Medicine.

Products, vendors, or commercial services mentioned or pictured in this publication are for illustrative purposes only and are not meant to be endorsements. Labels and product registration keep changing. If information in this publication disagrees with the label, always follow the label. The label is the law.

This material is supported by the USDA-NIFA award number 2017-70006-27145 and is within the guidelines of the Border 2020 Program funded by the US EPA and administered by NADB.



THE UNIVERSITY OF ARIZONA
Cooperative Extension

THE UNIVERSITY OF ARIZONA
COLLEGE OF AGRICULTURE AND LIFE SCIENCES
TUCSON, ARIZONA 85721

AUTHORS

SHUJUAN (Lucy) Li
Associate in Extension, Public Health IPM

JENNIFER WEBER
Assistant in Extension - Pesticide Safety Education Program

CONTACT
SHUJUAN (Lucy) Li
lisj@cals.arizona.edu

This information has been reviewed by University faculty.
extension.arizona.edu/pubs/az1858-2020.pdf

Other titles from Arizona Cooperative Extension can be found at:
extension.arizona.edu/pubs

Any products, services or organizations that are mentioned, shown or indirectly implied in this publication do not imply endorsement by The University of Arizona. Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Jeffrey C. Silvertooth, Associate Dean & Director, Extension & Economic Development, Division of Agriculture, Life and Veterinary Sciences, and Cooperative Extension, The University of Arizona. The University of Arizona is an equal opportunity, affirmative action institution. The University does not discriminate on the basis of race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, or genetic information in its programs and activities.