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Lice: What They Are and How to Control Them

Lice are a common group of ectoparasitic insects of goats. Generally goat lice are host specific and only attack goats and their close relatives, such as sheep. There are five species of goat louse that fall into two categories based on feeding habits. The **sucking lice** feed by piercing the skin with tiny needle like mouthparts to take blood directly from the capillaries. The **chewing lice** (also known as **biting lice**) have large robust mouthparts designed to scrape and abrade the skin and hair. Chewing lice consume tiny bits of skin, skin secretions and hair for food. The feeding habits and activity of these insects result in discomfort and irritation to the animal. Infested animals often cause structural damage to farm facilities by rubbing and scratching on fences and posts resulting in hair loss, skin damage, wounds and secondary infections. Parasites cause animals to have an unthrifty appearance, poor feed conversion, and reduced weight gains and milk production.

Louse life cycle: Both sucking and chewing lice undergo simple metamorphosis. Except for the egg (nit) each life stage resembles the adult in appearance. The female louse attaches an egg to the hair near the skin. The egg hatches in about 7-10 days. There are three nymphal stages each about 5-10 days in length, followed by the adult. Adult lice may live several weeks. Infestations are most severe in the winter months and when animals are under stress.

Sucking Lice

Two species of sucking louse infest goats in the United States.

The African blue louse: *Linognathus africanus* was originally described from Nigeria but has spread to the United States, Australia, Europe and Asia. The African blue louse measures about 2 mm in length and has a distinct bluish color indicative of sucking lice ([Figure 1](#)). The female louse attaches a single egg to one or more hairs. The latter results in a matted appearance of the hair coat. This species is unique in that it occasionally infests animals other than goats including cattle, deer, dogs and turkeys. Severe infestations may result in hair loss, anemia or death in some instances. Although *L. africanus* can infest any part of the body, closely examine the neck, base of the ears, poll, and jaw for infestations.

Goat sucking louse: *Linognathus stenopsis* is often misidentified because of its similar appearance to the African blue louse. The goat sucking louse is found in temperate regions worldwide. The complete life history has not been studied. Severe infestations result in dermatitis and anemia. Goat sucking lice may be found on the back and legs.

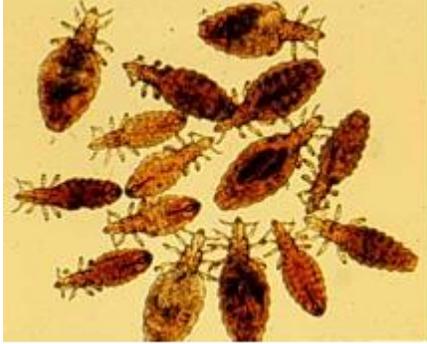


Figure 1. African blue louse, *Linognathus africanus*.

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Chewing Lice

Three species of these straw colored chewing lice infest goats.

Goat biting louse: *Bovicola caprae* (Figure 2). Eggs are deposited on hairs close to the skin and hatch in 7-10 days. Nymphs may disperse about the body feeding on skin debris. The entire life cycle requires about 36 days. *B. caprae* are most often found on short haired goats. However, occasional infestations of Angora goats occur. *B. caprae* are most abundant in the winter months.

Angora goat biting louse: *Bovicola limbatus* is often mistaken for the goat biting louse. This species is found anywhere Angora goats are raised. In the United States, meat goats pastured with Angora goats will become infested. The female louse lives about 18 days, during which she deposits about 1 egg per day on a single hair. The egg to egg life cycle is approximately 32 days.

Hairy goat louse: *Bovicola crassipes* is a large (2.2 mm) yellow louse easily identified by the abundance of hairs on its body. The hairy goat louse prefers long haired goats and is found anywhere Angora goats are raised. Eggs are attached to 2-3 hairs resulting in a matted unsightly appearance of infested animals. The life cycle from egg to egg is approximately 36 days.

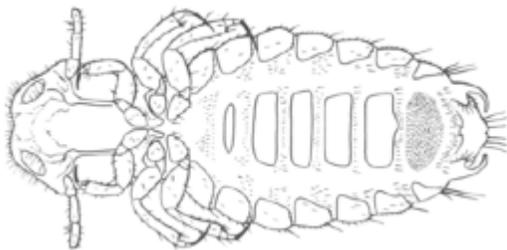


Figure 2. The goat biting louse, *Bovicola caprae*. Ventral view of female.

Price and Graham, 1997. Redrawn from Emerson and Price, 1975 *BYU Sci. Bull. Bio. Series*.

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Losses

Louse infested animals may be recognized by their dull, matted hair coat or excessive scratching and grooming behavior. Weight loss may occur as a result of nervousness and improper nutrition and blood loss to sucking lice may lead to anemia or death.

Lice are obligate external parasites that spend their entire lives on the animal. Lice are generally transmitted from one animal to another by contact. Dislodged adult lice may survive a few days, long enough to acquire a new host. Lice populations vary seasonally, depending largely on the condition of the host. Most sucking and biting lice begin to increase in number during the fall and reach peak populations in late winter or early spring. Animals under stress will usually support larger louse populations than normally found. Control of lice infestations is needed whenever an animal scratches or rubs to excess.

Diagnosis is by physical examination of animals for crawling lice and eggs attached to the hairs, or of material collected by plucking or combing.

Satisfactory louse control requires two applications at 10- to 14-day intervals to remove young lice emerging from the protective egg case. Replacement animals should be quarantined and treated twice before being introduced to the herd.

Anthelmintics such as Ivermectin and Moxidectin are effective against **sucking lice**. **Note: Ivermectin and Moxidectin products are not labeled for goats.**

Registered products for both **sucking** and **chewing lice** are residual sprays or pour-on products. Several different products are available for louse control. Use pesticides according to label directions to avoid contamination of milk, meat or the environment.

Caution: Young kids are especially sensitive to over-dosing.

Insecticide	Formulation	% Active Ingredient	Signal Word	Pests
Permethrin				
Atroban 11% EC Insecticide Schering Plough	Emulsifiable Concentrate	11%	Caution	black flies, eye gnats, horn flies, horse flies, house flies, lice, mange mites, mosquitoes, scabies mites, sheep keds, stable flies, ticks
Catron IV Boeringer Ingleheim	Aerosol	5%	Caution	deer flies, fleece worms, horn flies, horse flies, house flies, gnats, stable flies, ear ticks, screwworms
Durvet 10% Permethrin Durvet, Inc.	Emulsifiable Concentrate	10%	Caution	face flies, horn flies, stable flies, mosquitoes, lice, mites, ticks
GardStar 40% EC Y-TEX	Emulsifiable Concentrate	40%	Danger	black flies, deer flies, eye gnats, horn flies, horse flies, house flies, lice, mange mites, mosquitoes, sheep keds, stable flies, ticks

Insecticide	Formulation	% Active Ingredient	Signal Word	Pests
Martins 10% Permethrin Control Solutions, Concentrate Inc.	Emulsifiable	10%	Caution	face flies, horn flies, stable flies, mosquitoes, lice, mites, ticks
Zeta Cypermethrin				
Python Dust Y-TEX	Dust	0.075%	Caution	horn flies, keds, lice, ticks

Safe Pesticide Use:

1. Read the label before using any pesticide, pay attention to all warnings and precautions.
2. Store all pesticides in their original containers, away from food, feed and water.
3. Keep all pesticides out of the reach of children, pets and livestock.
4. Apply pesticides only as directed by the label.
5. Dispose of empty containers promptly and safely.

References

Kaufman, P. E., P. G Koehler and J. F. Butler. 2009. [External parasites of sheep and goats](#). ENY-273. UF/IFAS Extension. Gainesville, FL.

Price, M. A. and O. H. Graham. 1997. Chewing and sucking lice as parasites of mammals and birds. USDA, ARS. Tech. Bull. 1849.

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