

Washington Animal Agriculture Team



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Do You Have Lousy Animals?

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As we enter the colder, darker, damper time of year, we will be re-visited by a pest from the past: lice. An annual problem, lice can affect animal health and farm profitability. Here is a short primer on this parasite.

(Table 1). This means poultry lice won't spread to cattle or people and vice versa. Sheep and goats can share some lice species, however. The table lists primary locations of particular lice on their host, but keep in mind that when lice numbers are very high, they may be found anywhere on the body.

Species Specificity

Lice are generally quite species specific

Table 1. Animal hosts and their lice species

Animal host	Biting lice		Sucking lice	
	Species	Location	Species	Location
Cattle	cattle biting louse	head, ears, neck, topline, brisket	longnosed cattle louse	
			little blue cattle louse	head, ears, neck, topline, brisket
			shortnosed cattle louse	
Goats	goat biting lice (3 species)	base of tail, between legs, head, neck, topline	goat sucking lice	neck, underline, udder
Equines	horse biting louse	at roots of forelock and mane, base of tail, hairs above hoof	horse sucking louse	side of neck, flanks, base of tail
Sheep	sheep biting louse	all over body	sheep foot louse	on foot
			face and body louse	hairy parts of skin
			African blue louse	on flanks
Swine			hog louse	in or behind ears, in neck folds, inside legs, inner flanks, under scurf of skin

Sources: Merck Veterinary Manual 2010 online and www.pested.msu.edu.

Life Cycle

The entire life cycle of most lice species takes about a month and occurs on the host. Adults and nymphs that fall off the host do not survive beyond a few days. Adults feed for about a month, then lay eggs (“nits”) and die. Nits are attached tightly to hair shafts. Eggs hatch in one to three weeks and the resultant nymphs metamorphose into adults. Adult biting lice and nymphs eat dead skin cells, hair and other debris found on skin; adult sucking lice and nymphs penetrate skin and consume blood.

Signs of Infestation

Most experienced livestock owners are well acquainted with the signs of lice infestation: rough coat, hair loss, scratching, irritated skin, secondary skin wounds and infections, weight loss and general restlessness. Occasionally, afflicted animals develop problematic hairballs from licking themselves excessively and ingesting hair. Heavy infestations of sucking lice can result in clinical anemia and even death, especially in young animals. Lice can sometimes transmit disease-causing agents, such as rickettsia. They can also debilitate animals enough to predispose them to secondary problems such as pneumonia.

Transmission

If lice don't live off the host very well and they aren't a problem in summer, why are they a problem every winter? Some “carrier” animals may harbor small populations of lice year-round. When it gets to be a louse's favorite time of year (dark, cold and damp), animals are usually in close contact to stay warm, making it easy for lice to move between animals. Carriers give managers another reason to closely inspect any new animals brought into a herd; consider lice treatment as something to add to your quarantine procedure.

Diagnosis

Examine livestock for lice regularly starting in early fall. To find the more common but less pathogenic biting lice, part the animal's hair on its neck and back and look for very small moving grayish or brownish

insects. The dash in Figure 1 is about the same size as an actual louse; it is very small (~2-3 mm) but still visible to the naked eye. A magnifying glass or zoom lens (macro function) on a digital camera (Figure 2) makes diagnosis even easier. Sucking lice are generally larger and darker than biting lice. Depending on the host and lice species, they may also be found on an animal's muzzle, feet, legs, udder and groin areas. When in doubt, use sticky tape to capture a specimen and take it to your veterinarian for identification.



Figure 1. Approximate actual size of an adult louse



Figure 2. Goat sucking lice seen with a macro function on a digital camera

Treatment and Control

There are two important things to keep in mind regarding treatment:

1. All livestock on an affected premise should be treated at the same time.
2. Most de-licensing treatments do not kill lice eggs.

Lice treatments come in many forms including sprays, pour-ons, dust bags, back rubbers, drenches, dipping vats and even injections for some lice species. Examples of treatments for different animal hosts appear in Table 2; your veterinarian may recommend extra-label use of other medications if a valid veterinary-client-patient relationship exists and proper record keeping is conducted. For all products, be sure to follow label instructions.

Theoretically, treating all livestock at the same time and re-treating two to three weeks later and moving to a clean environment should break the lice cycle. However, an infestation can persist if dusting powder is used and lice on an animal's

underbelly escape treatment or if nits on shed hair are transported to a new site via clothing, wind, equipment etc.

An early or mid-winter series of two treatments should be conducted when routine monitoring reveals three or more lice per

square inch of skin. Lice populations will naturally decline when environmental temperatures are consistently over 60°F. Excellent nutritional programs have been shown to make livestock more resilient to lice infestations.

Table 2. Examples of treatment recommendations for lice on different animal hosts.

Animal host	Treatment
Cattle	ivermectin subcutaneous injection at 1 ml per 110 lb body weight. Do not treat within 35 days of slaughter. cyfluthrin pour on at 8 ml per 400 lb of body weight (see label chart). Pour along top of back and head.
Goats, sheep	zeta-cypermethrin + synergist dust. Apply up to 2 oz per animal evenly into hair over head, ears, neck, shoulders, back and tailhead.
Horses	zeta-cypermethrin + synergist dust. Apply up to 2 oz per animal evenly into hair over head, ears, neck, shoulders, back and tailhead. permethrin 0.5% ready to use. Spray or wipe on with applicator mitt. Avoid eyes. Do not soak hair or skin.
Swine	ivermectin subcutaneous injection at 1 ml per 75 lb body weight. Treat sows 14 days before breeding or farrowing. Do not treat within 18 days of slaughter. permethrin 0.25% dust. Apply up to 1 oz per animal as a uniform coat to head, shoulders, and back. Do not treat within 5 days of slaughter.

Source: Pacific Northwest Insect Management Handbook. <http://uspest.org/pnw/insects>

Note: Your veterinarian may prescribe other treatments that are not listed here.

Use pesticides with care. Apply them only to plants, animals, or sites listed on the label. When mixing and applying pesticides, follow all label precautions to protect yourself and others around you. It is a violation of the law to disregard label directions. If pesticides are spilled on skin or clothing, remove clothing and wash skin thoroughly. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock.

For more information

<http://wiki.bugwood.org/uploads/CattleLice-Cattle.pdf>

www.goatbiology.com/lice.html

http://ipm.ncsu.edu/AG369/notes/hog_louse.html

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