



Insect Answers:

Control of Sheep Keds

WASHINGTON STATE UNIVERSITY EXTENSION FACT SHEET • FS019E

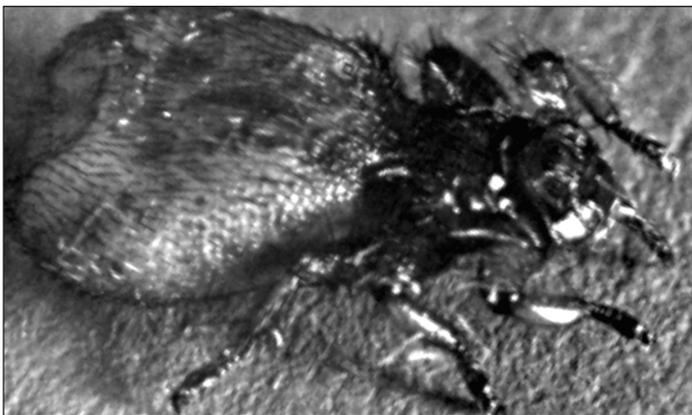
The sheep ked or sheep “tick,” *Melophagus ovinus*, is found on sheep in most sheep-raising areas of the world. In the United States it is most abundant in the west.

Symptomology and Economics

The sheep ked is a pest only of domestic or mountain sheep and goats. There are no alternate host animals and no free-living stages.

Keds generally infest the neck, breast, shoulders, belly, and thighs, and can be easily detected by parting the wool. They pierce the skin and suck blood, causing irritation to the sheep and forcing them to scratch and bite at themselves. Scratching results in wool tags left on fence wires.

Heavily infested animals may become weak and unthrifty and show weight loss, anemia, wool staining, reduced resistance to disease, and a condition called “cockle.” Cockles are raised bumplike skin blemishes caused by ked bites. They reduce the value of the skin.



Adult sheep ked

Young animals are the most susceptible to ked infestation, because keds migrate to the lambs after ewes have been sheared. In some areas, up to 25% reduction in fleece yields has been noted.

Description and Life History

The sheep ked is frequently called a sheep tick, but is a true insect rather than a tick. It represents a family of flies parasitic on such mammals as deer, goats, and sheep. There are species that prey on some birds.

The sheep ked spends its whole life cycle on the host. Sheep keds that become dislodged do not usually pose a threat of reinfestation to other sheep. Dislodged keds only live about 4 days off their hosts. Spread is almost entirely from sheep to sheep, although people (shearers, etc.) can help to spread them.

The ked is ticklike in appearance, about 1/4 inch long, and reddish or gray-brown in color. It is unusual in not laying eggs. Eggs, produced singly, are retained in the uterus and hatch there. The young larva remains within the female ked, feeding from special nutritive glands until it is fully developed. Only one develops at a time. When full development is reached, each larva is expelled almost immediately, forming a puparium that attaches to the wool.

The puparium is barrel-shaped, dark reddish brown, and about 1/8 inch long. During warm months, the adults emerge from the puparium in about 3 weeks; about 6 weeks are required during cold months.

Female keds live for about 5 to 6 months during which time they may produce up to two dozen young at a rate of about 1 every 7 days.

Ked populations build up during the fall and early winter months, begin to peak during the first of the year, then decline until early summer. The decline is associated with resistance of the sheep at this time. The

blood flow to the outer skin layer is cut off, causing ked starvation. There is also cellular infiltration to sites of ked feeding, blocking the free flow of blood to the parasite.

Management Suggestions

Management recommendations for keds on sheep and goats can be found in the current edition of the PNW Insect Management Handbook.



By Arthur L. Antonelli, Ph.D., WSU Extension entomologist emeritus, WSU Puyallup REC; and Larry Sandovol, Ph.D., University of Idaho Extension entomologist, University of Idaho, Aberdeen.

Use pesticides with care. Apply them only to plants, animals, or sites as 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.

WSU Extension bulletins contain material written and produced for public distribution. Alternate formats of our educational materials are available upon request for persons with disabilities. Please contact Washington State University Extension Publishing and Printing for more information.

You may order copies of this and other publications from WSU Extension Publishing and Printing at 1-800-723-1763 or <http://pubs.wsu.edu>.

Issued by Washington State University Extension and the U.S. Department of Agriculture in furtherance of the Acts of May 8 and June 30, 1914. Extension programs and policies are consistent with federal and state laws and regulations on nondiscrimination regarding race, sex, religion, age, color, creed, and national or ethnic origin; physical, mental, or sensory disability; marital status or sexual orientation; and status as a Vietnam-era or disabled veteran. Evidence of noncompliance may be reported through your local WSU Extension office. Trade names have been used to simplify information; no endorsement is intended. Revised June 2010. Subject code 180, 352. *This publication replaces EB1389.*