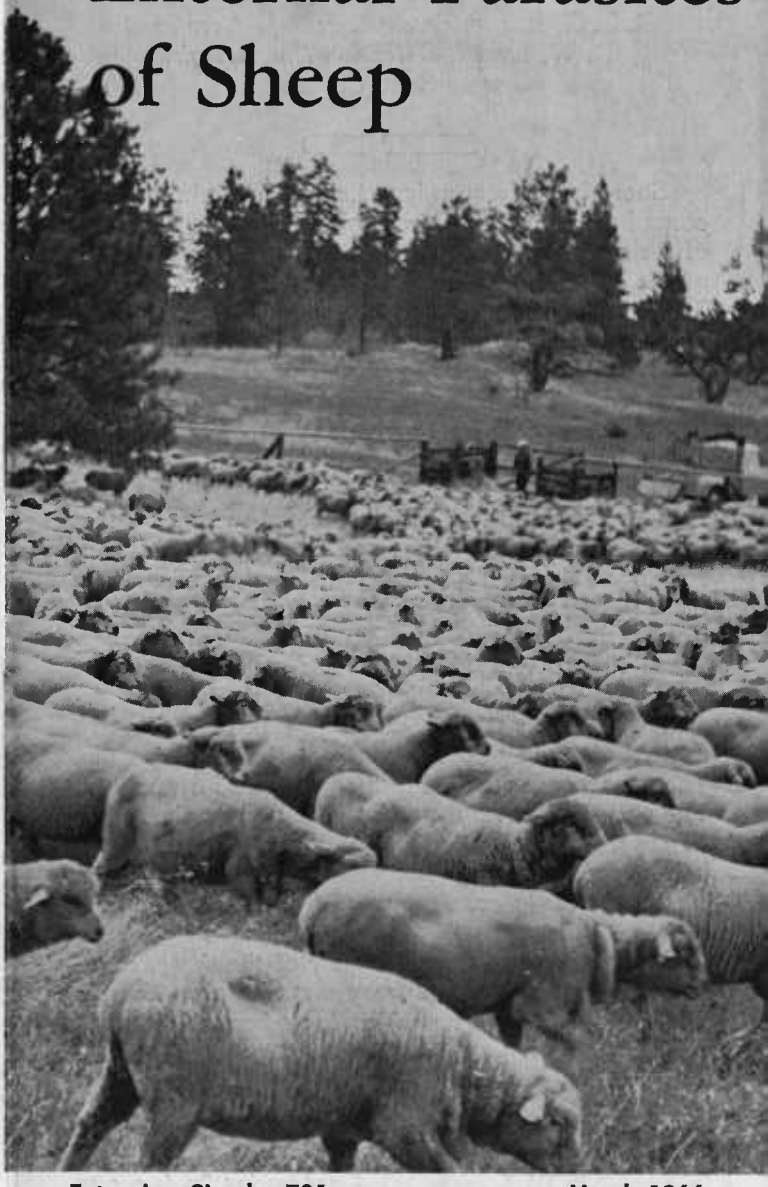
Control of External Parasites of Sheep



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Control of External Parasites of Sheep

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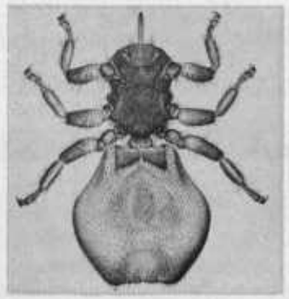
SHEEP KED

Sheep keds, frequently referred to as "sheep ticks" occur in all parts of Oregon. They feed on the blood of their host, causing irritation and reducing the vitality of the animal. There may be loss of wool by rubbing. The fleece of infested animals on close examination has a trashy appearance. Lambs are most noticeably affected and when heavily infested do not gain normally. The sheep ked has also been incriminated as a transmitter of bluetongue disease in sheep. Control of sheep keds should be a routine part of good sheep and lamb management.

The sheep ked is a wingless, blood-sucking fly that lives on the bodies of sheep and occasionally goats, but no other animals. Eggs hatch within the body of the female ked and larvae hatching from these eggs complete their development within the body of the ked. When fully developed, the larva is extruded from the body of the ked. At the time of birth, the larva is covered with a soft white membrane, which turns brown in a few hours and becomes a hard shell or puparium. The puparia are attached to the wool fibers of the host. The period of larval development is usually about 8 or 10 days, and it usually requires from 10 to 24 days before the young tick emerges from the puparium. Mating normally occurs four to five days after emergence.

When dislodged from the body of the sheep, emergence from the puparium may not take place for six weeks or more. Pupae which have become detached from their host are unable to withstand freezing weather. Detached pupae are not important in the spread of sheep keds. Infestations develop as a result of contact with infested animals. New animals should be treated before putting them in the flock.

Sheep can be treated at any convenient time. Farm flocks treated in September or October will not have infestations of keds to move from ewes to lambs during the lambing period. Range flocks are often treated immediately after shearing.



The sheep ked, a wingless, blood-sucking fly, is a common insect pest of sheep throughout Oregon.

TICKS

True ticks, unlike the sheep ked, are not insects but spider-like animals with eight legs in the adult stage. Several species are found in Oregon. They feed on the blood of animals, including man.

Rocky Mountain wood tick (female, above; male, below) is sometimes a pest of sheep in eastern Oregon. It is injurious to both men and livestock.

Rocky Mountain wood tick, *Dermacentor (andersoni) venustus,* also known as the "spotted fever" or "sage" tick, occurs in many parts of eastern Oregon. In years of tick abundance or in those localities where ticks are numerous, there is a possibility that this tick, feeding on host animals, may cause a condition known as tick paralysis. It is a vector of Rocky Mountain spotted fever and several other diseases. Sheep frequently bleed from wounds inflicted by tick feeding and the blood stains the wool. The blood-stained wool may be attractive to adult wool maggots.

Sheep pick up ticks from brush or other foliage. Ticks remain on the sheep only long enough to engorge themselves on blood and then drop to the ground where they lay eggs.

In eastern Oregon, ticks are most abundant during the spring months; April and May at the lower elevations, and June in the higher rangeland.

The Rocky Mountain wood tick does not occur in western Oregon. Species of ticks found in the western part of the state are seldom sufficiently abundant to present a problem. In western Oregon, ticks are most frequently found on sheep during the winter or early spring.

WOOL MAGGOTS

Certain "blow flies" may lay eggs around soiled wool or wounds. The larvae of these flies are known as wool maggots or fleece worms. Losses may result from "fly strike" if affected animals do not receive prompt attention. To prevent infestation, especially of ewes at lambing time, many sheepmen practice "crutching" or "tagging" before lambing begins and before green grass and weeds become abundant in pastures. In spite of benefits gained from this practice, sheep may become infested with wool maggots. This is particularly true when considerable rainfall occurs in the spring and when the weather is cloudy, warm, and humid. Such weather prevents the wool from drying and thereby makes it more attractive to flies for egg deposition. Under these conditions, insecticides have proven helpful in preventing "strike."

LICE

Sheep lice have not been a serious problem in Oregon. Two species of sucking, or blood feeding, lice occur on sheep. The sheep foot louse has a decided preference for the legs. In moderate infestations, it is found only around the feet and lower portions of the legs. The other species of sucking louse may infest any part of the body.

The biting louse of sheep, sometimes referred to as the red-headed sheep louse, is small—only about one-twentieth of an inch in length. The biting louse does not feed on blood, but feeding activities at the surface of the skin cause intense irritation. Infested animals rub against solid objects and scratch and bite at themselves.

SHEEP MANGE OR SCAB

Sheep mange is caused by one of several species of mange mites. Sheep scab, caused by the sheep scab mite, *Psoroptes equi ovis,* is the most frequently occurring mange condition. Chorioptic mange or foot scab, caused by *Chorioptes ovis,* is also found with some frequency. Demodectic scab (follicular mange) and head scab (sarcoptic mange), caused by the mites *Demodex canis ovis* and *Sarcoptes scabei ovis,* are less frequently found.

State and federal laws require that all types of mange be reported to the State Veterinarian. Infested flocks are subject to quarantine until treated with an approved pesticide under the supervision of the State Veterinarian.

CONTROL—METHODS AND MATERIALS

External parasites of sheep can be controlled by dusting, spraying, or dipping. The accompanying chart lists suggested insecticides and the methods by which they may be applied.

Large flocks of sheep can be quickly and effectively treated by power dusters. The tubing from the power duster outlets is arranged above and at the sides of a chute through which the sheep are run. With good facilities and sufficient help, sheep can be treated as fast as they move through the chute.

Small farm flocks can be dusted by means of a rotary or a bellows-type hand duster. If only a few sheep are to be treated, the insecticide can be rubbed into the wool by hand.

A few men can treat several thousand sheep a day with a chute leading to a power duster.

Spraying sheep in a small pen insures thorough coverage. Small flocks can be treated with hand or power equipment in small pens.

Sheep can be treated with a high-pressure sprayer. If wettable powder formulations are used, it is essential that the sprayer have a good agitator in the spray tank. One of the methods of spraying used is to place a dozen or so sheep in a pen about 12 feet square. The spray operator gets into the pen with the sheep to do the spraying; and in this way he is able to give the sheep the thorough wetting necessary for control.

If dipping vats are available, there is no more effective method of control than dips.

A row-crop duster can be adapted for treating sheep. Other dusters, specifically manufactured for this purpose, are available.

USE CHEMICALS WITH CAUTION

To avoid possible loss to fish, do not clean spray equipment near streams. Construct dipping vats in locations where drainage is away from streams or lakes. Before using any insecticide on sheep, read the manufacturers label on the pesticide container. Be sure it is a formulation suitable for livestock use. Follow all the precautions on the label. Do not treat animals that are weakened, emaciated, or under stress.

Insecticides and Methods of Application

	Insecticide and percent concentration	Amount of insecticide per 100 gallons of water as spray or dip*	Interval between application and slaughter†
SHEEP KEDS TICKS LICE	Coumaphos (Co-Ral)—0.125% spray or dip	4 lbs. 25% W. P., as dip or spray	Do not treat within 15 days of slaughter.
	0.5% dust	1 to 2 oz. dust per animal	
	Dizainon—0.03% spray	½ lb. 50% W. P., as spray only	Do not treat within 14 days of slaughter. Recommended for sheep ked and louse control only.
	2.0% dust	1½ oz. dust per animal	
	Ronnel (Korlan)—0.25% spray or dip	1 gal. 24% E. C., as spray only 8 lb. 25% W. P., dip or spray	Do not treat within 12 weeks of slaughter.
	Malathion—0.5% spray	1 gal. 57% E. C. *or* 16 lbs. 25% W. P. as spray only	No time limitation between application and slaughter.
	5% dust	1 to 2 oz. dust per animal	
	DDT—0.5% spray	8 lbs. 50% W. P., as spray	Do not treat within 30 days of slaughter.
	0.25% dip	4 lbs. 50% W. P., as dip	
	Toxaphene—0.5% spray	10 lbs. 40% W. P., *or* ½ gal. 8 lbs./gal. E. C., as spray	Do not treat within 28 days of slaughter.
	0.25% dip	5 lbs. 40% W. P., *or* ¼ gal. 8 lbs./gal. E. C., as dip	
	Lindane—0.03% spray or dip	1 lb. 25% W. P., as dip or spray *or* 1¼ pt. 20 E. C., as dip or spray	Do not spray or dust within 30 days or dip within 60 days of slaughter. Do not use on emaciated or lactating animals.
	1.0% dust	1 to 2 oz. dust per animal	
WOOL MAGGOTS	Coumaphos (Co-Ral)—0.125% spray	4 lbs. 25% W. P., dip or spray	Do not treat within 15 days of slaughter.
	0.5% dust	1to 2 oz. per animal	
	Ronnel (Korlan)—0.5% spray or dip	2 gals. 24% E. C., as spray 16 lbs. 25% W. P., dip or spray	Do not treat within 12 weeks of slaughter.

* W. P. = wettable powder. E. C. = emulsifiable concentrate.

† To avoid excess pesticide residues in animal tissue, be sure to observe the interval between application and slaughter.

BEFORE USING ANY PESTICIDE ON SHEEP, READ THE PRECAUTIONARY STATEMENTS ON THE LABEL