

# Oregon Agricultural College Extension Service

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## LIVER FLUKES IN SHEEP, GOATS, AND CATTLE

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Liver flukes are among the most serious of the animal parasites which are found in Oregon. They are frequently called leeches in this State. The mature parasites are from three-quarters to one inch in length, and about one-half as broad as they are long. They are flat and resemble in shape somewhat the cherry leaf. The mature flukes live in the gall bladders and bile duct of livers of sheep, goats, and cattle. Occasionally other animals are infected. It is said that each fluke is capable of producing from twenty to forty thousand eggs. These pass out of the animal with the feces, and hatch, living in water. These swimming parasites then attack some shell animal, probably a snail, although it is claimed they may attack other shell animals. After passing through several changes in the snail, the parasite emerges and lives in water again. Now it may encyst itself on plants, which are growing near the water, and in this form it is taken in with the food by susceptible animals. After reaching the intestine, the young flukes enter the bile duct, and develop to maturity in the liver or the gall bladder. Most of the flukes pass out of the livers of infected animals during the spring months.

These parasites are found in all of the counties of Oregon west of the Cascades. They are very serious in the Willamette Valley, but are not so prevalent along the coast, especially where the water is brackish.

Symptoms vary somewhat with the strength of the infected animals and the severity of the infection. The infection is usually most serious in young animals, and the symptoms are most noticeable during the winter and early spring months. Those infected show loss of weight and strength. The bowels may be normal at the beginning of the attack, but in most instances there is some diarrhoea before the trouble disappears. The skin loses its normal pink color and the wool may slip easily. The amount of yolk is decreased. Such a skin is sometimes spoken of as "paper skin." As the animal becomes weak, a soft, pasty,

swelling, that is neither hot nor painful when touched, may appear between the lower jaw. The animal may become very noticeably pot-bellied. In some flocks where the infection is very severe, the affected sheep may die in a few days after the first symptom is noticed, but quite frequently they live several weeks. The diarrhoea is usually persistent, and the animals grow weaker and weaker, appearing to die from exhaustion. In the later stages, gritting of the teeth may be a very common symptom.

A very high percentage of animals which show symptoms die from the infection. Those which recover usually regain their strength and flesh rather slowly.

\* A positive diagnosis is made by finding the parasites in the livers of the animals which have died from the trouble. The flukes become bile stained, and the examination should be conducted rather carefully in order to prevent overlooking the parasites.

Since no effective treatment has been found, control consists in the proper methods of prevention. Wet pastures should be avoided as much as possible. Those wet or swampy pastures on which flukey sheep or cattle have been kept are very dangerous. Sloughs or ponds receiving drainage from infected pastures are, in every case, to be avoided. If small areas of swampy land are in an otherwise dry pasture it is advisable to fence off the wet places. Some have advised the liberal application of coarse salt to these wet spots. It is claimed that German carp will eat the young flukes, and the introduction of these fish into streams and ponds in the infected section has been advocated. The spring, summer, and early fall months are those in which the infection takes place. Wet springs are always followed by serious losses from fluke infection during the next winter. Now is the time to avoid the infection. It should be remembered that next winter when the sheep begin to die from the effects of flukes, little or nothing in the way of treatment can be done.