# **RINGWORM (CLUB LAMB FUNGUS) IN SHEEP**

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Ringworm in sheep is an infection of the outer layer of the skin and hair shafts by one of several types of fungus. All domestic animals and people are susceptible to ringworm. In rural areas, 80% of ringworm cases in people are caught from animals and these human cases may be especially severe.

In the past, ringworm has been considered uncommon in sheep. In 1989 and 1990 it was seen frequently in lambs in New Mexico, Colorado, and Wyoming. By 1992, Ringworm was considered a problem in lambs in Kentucky and has been diagnosed more often in Tennessee for the last couple of years.

In most states, lambs with ringworm are not eligible for shipment and are barred from shows and exhibitions.

# TRANSMISSION AND PREDISPOSING FACTORS

The fungus is most commonly transmitted from one animal to another by direct contact between animals. The disease can also be transferred by clippers, brushes, combs, blankets, fence posts, fence wire and the hands of handlers.

Once an infected animal comes in contact with equipment, the equipment can remain a source of infection for up to 4 years.

Certain factors make an animal more susceptible to ringworm infection.

1.Young animals are more easily infected.

2. Poor nutrition increases the likelihood of ringworm infection.

3. Animals that have not had ringworm before are more likely to catch it.

4. Animals kept in the same pen with infected animals are more likely to catch ringworm.

5. Animals kept in dark, damp, warm, and poorly ventilated places become infected more easily.

6. The use of clippers, brushes, and blankets on different animals without disinfection will spread this disease.

7.Sheep in contact with infected cattle can get this disease.

8. Washing lambs frequently will remove normal skin bacteria and lanolin, and make these lambs more susceptible to ringworm.

9.Flies may spread ringworm.

### DIAGNOSIS

One to four weeks after coming into contact with the fungus, sheep will first show signs of disease. The fungus affects both the outer layers of skin and the wool. The fungus spreads outward from the center

causing a more or less circular area of wool loss. The ears, head, and neck are the most likely areas to be affected. The first sign of ringworm is often a raised area where the wool is clumped and feels stiff. These areas are more easily felt than seen. Once the wool comes out, a circular area of wool loss 1/2 to 2 inches in diameter is seen. Often, this area is covered by a gray-white scab. Itching is not usually present. Almost all animals with ringworn will recover in 1-4 months, though a spot of darker wool may result.

### TREATMENT

The ringworm fungus is most likely to be found at the outer edge of the woolless area and in the normal wool next to the woolless area. Treatment should begin with removing the wool for about 2 inches around the ringworm spot. Next a brush and soapy water should be used to remove the scab down to the skin. This makes it easier for treatment to reach the fungus. Be sure to properly disinfect or dispose of clippers, brushes, wool, and scabs.

Treatment may shorten the healing time but is important mainly to reduce the spread of the disease to other animals. Several disinfectants can be used to treat ringworm, though none have been approved by the FDA for the treatment of ringworm in sheep. Always soak the entire animal and not just the hairless spot. These products may be applied with sprayers, poured on, or the animal may be immersed in a large container.

- .5% chlorohexadine (Nolvasan 3 oz. per gallon) is very effective but is inactivated by soap. This is likely the best treatment now available.
- 1:10 dilution of hypochlorite solution (Chlorox) is effective but will corrode metal it comes in contact with.
- 1:300 dilution of Captan will work for some types of ringworm but is not approved for use in food animals, may irritate human skin, and is listed as a carcinogen by the EPA.
- .5 to 1% povidol iodine (tamed iodine) can be used but may stain.
- .5% lime-sulfur solution is effective but smells like rotten eggs and stains wool yellow.
- Affected animals should be treated daily for 5 days, then weekly for 3 treatments.
- Vitamin A injection may speed healing.

### PREVENTION

Prevention of ringworm cases begins with isolation of new arrivals on the farm for 30 days. This gives these animals time enough to develop the disease before they contact other animals. A single whole body treatment with chlorohexadine before releasing these animals is a good idea.

Frequent bathing of sheep results in loss of lanolin and a change in normal skin bacteria. This may make the animal more susceptible to ringworm. Avoid excessive bathing.

Cattle may serve as a source of fungus to sheep. Avoid mixing infected cattle and sheep.

Other sheep with ringworm are the most likely source of the disease. Isolate affected sheep from others until wool begins to grow back.

Ringworm fungus may be anywhere on the sheep, not just the areas where wool has been lost. Treat the entire sheep not just the ringworm spots.

Ringworm fungus can survive for months on brushes, combs, blankets, clippers, fence, fence posts, and soil. Disinfect pens and equipment where infected sheep have been (1:10 dilution of hypochlorite) before using it for other animals.

Most states will not allow sheep with ringworm to enter show grounds. Ringworm can quickly be spread over a wide area by infected animals being taken to shows and sales. Do not take infected animals to shows.

Ringworm or club lamb fungus is a troublesome disease. Careful observation, effective treatment, and thoughtful prevention should keep this disease from being a problem in your flock.

#### REFERENCES

Hunt, E. Infectious skin diseases of cattle. In: Large Animal Dermatology. Mullowney, P.C. (ed) Veterinary Clinics of North America, Vol. 6 (#1) pp 155-159, March 1984. W. B. Saunders.

Dermatophytosis. Merck Veterinary Manual (7th edition) Charles Fraser (ed) pp 789-7910. Merck and Co. 1991.

Pier, A. C. Ovine dermatophytosis. Kentucky Herd Health Memo No. 5, pp 44-45, November 1992.

Claeys, M. C. Club Lamb Fungus is all around us. North Carolina Cooperative Extension Service Newsletter, p 15. Aug/Sept 1992.

White-Werthers, N. and Medleau, L. Evaluation of topical therapies for the treatment of dermatophyte-infected hairs from dogs and cats. Journal of the American Animal Hospital Association. Vol 31, pp 250-253. May/June 1995.

Rosser E. J. Infectious Crusting Dermatoses. In: Dermatology, Veterinary Clinics of North America, V. Fadak (ed), Vol 11 (#1), pp 53-59, April 1995.

Scott, E. M., Gorrnan, S. P. and McGrath, S. J. An assessment of the fungical activity of antimicrobial agents used for hard surface and skin disinfection. Journal of Clinical and Hospital Pharmacy, Vol 11 (#3), pp 199-705. 1986.

Scott E. Dermatophytosis. In: Large Animal Dermatology, pp 172-182.

Dermatomycosis. In: Bovine Medicine, Diseases and Husbandry of Cattle. Andrews A, Blowey R, Boyd H, Eddy R. (eds), pp 1164-1167. Blackwell Scientifics Publ. 1992.

Pier, A. C. Dermatophytosis. In: Current therapy, Food Animal Practice. J. Howard (ed), 3rd Edition. pp 924-927. 1993, W. B. Saunders.

Captan 50W. Material Data Safety Sheet. C & P press, pp 1-2.

Hulliner, G.A., et.al. Dermatophytosis in show lambs in the United States. Veterinary Dermatology (199), 10,73-76.