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Footrot in sheep, part 2 - the need for summer treatment

FOOTROT IN SHEEP

Part 2—The Need For Summer Treatment

(Contributed by the Veterinary Branch)

OWING to the recent intensification of the campaign against footrot instigated by the Veterinary Branch of the Department of Agriculture, most flockowners are now familiar with the symptoms of the disease as manifested during the wetter periods of winter and spring.

During the periods when lush green feed is abundant, footrot soon advertises its presence in a flock. Wet ground softens the hooves and the skin of the feet so that the organisms responsible for footrot find it easy to gain entry to the tissues where they multiply and produce severe lameness.

During the dry summer months conditions are not conducive to a spread of the disease however. The hooves harden, and many mild cases of footrot will cure themselves, for the organisms require moisture to enable them to survive and multiply.

Although a flock may contain a percentage of badly-infected feet, the chances of spreading the infection during dry, hot weather are comparatively slight.

Even where infected material from the diseased feet is left on the ground, the organisms are unlikely to survive long enough to spread the infection. Hot dry weather shortens the period during which the organisms can survive away from the host animal, and in any case, the majority of the hooves in the flock are now adequately protected against infection by sound, hard horn and dry healthy skin.

As a result of these natural controls, lameness caused by footrot may become scarce or non-existent during the summer and the farmer is apt to relax his vigilance and congratulate himself on having "cleaned up" his flock.

With the advent of the wet weather, however, the chances are that he will again find himself fighting footrot. With his property still quarantined, and his flock still containing lame sheep which spend their time lying down instead of grazing, he will be apt to subscribe to the once-popular belief that the footrot organisms, when once introduced into a property, will exist in the soil for many years.

This of course is a fallacy that has been convincingly disproved on many occasions. Under the most favourable

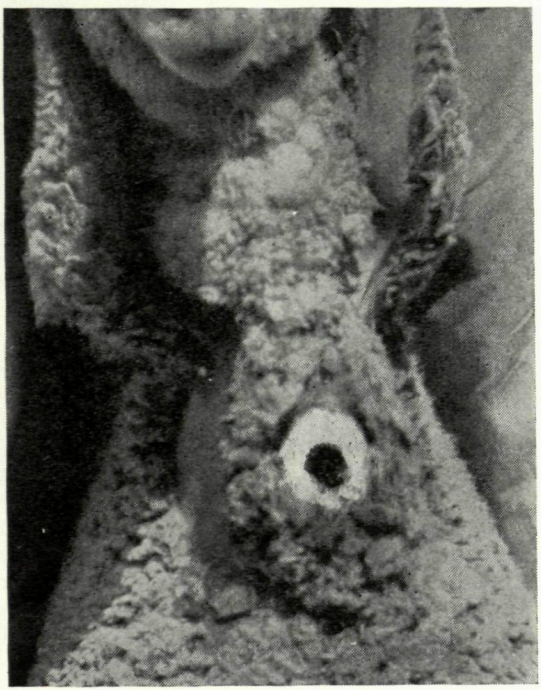

Fig. 1.—Because its footrot-infected feet made standing painful, this sheep spent much of its time lying down. A sore formed on the brisket through prolonged contact with the ground and this became infected, producing an abscess.

conditions the footrot organisms will not survive in the soil for more than about seven days. Consequently, if the paddocks have not carried sheep for 14 days, the flockowner can count on an ample margin of safety from infection.

"CARRY-OVER" INFECTIONS

How then is the organism able to infect the flock in the winter when all the sheep were apparently footrot-free during the previous summer?

The answer is found in the word "apparently". Some, at least, of the sheep which appeared foot-rot free were still carrying the infection.

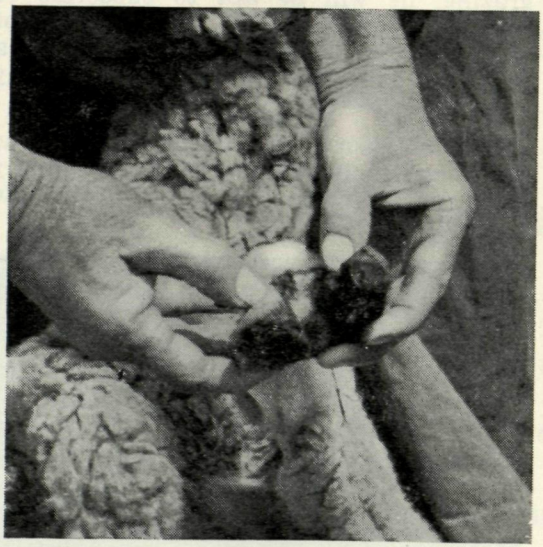

Fig. 2.—A moist, hairless patch between the claws of this foot shows that the footrot organisms are still active in this area. The claws are also mis-shapen suggesting the presence of footrot lesions beneath the horn.

In other words, sufficient organisms remained alive in the feet of the sheep throughout the summer months, to provide a nucleus for the winter infection. As soon as conditions were satisfactory, these small points of infection which had barely maintained their viability during the dry period, multiplied rapidly and infected the pastures.

The feet which, throughout the dry period, had been shod with hard horn were now soft and water-soaked. Small wounds caused by grass-cuts, injuries from stones, doublegees, etc., offered easy entry to the footrot organisms and soon a massive infection was in full swing.

PREVENTING THE "CARRY-OVER"

How this "carry-over" of infection could be dealt with was demonstrated recently at the third of the "footrot schools" organised by the Chief Veterinary Officer (Mr. C. R. Toop) in order to familiarise Departmental veterinary officers and stock inspectors with this phase of disease control.

For the purpose of the demonstration, a flock was chosen which had carried a severe footrot infection during the winter, when large numbers of sheep were treated by hand-swabbing. Labour shortages and the absence of a footbath had made it impossible to follow up the preliminary treatment.

When this flock was inspected last winter, about nine sheep out of every ten had footrot—many in an acute form. Even though the initial treatment by footparing and hand-dressing left much to be desired, the treatment, plus the advent of dry weather, had reduced the incidence of infection to perhaps one sheep in seven which, of course, still left a substantial carry-over.

Although the flock had been run as one unit on the same paddocks, there was a striking variation in the condition of the individual animals according to the severity of the footrot infection.

Animals which had escaped infection or which had been cured early in the season were fat and carrying good growths of wool.

Where they had been more severely infected for longer periods, they showed a corresponding lack of condition, being at the forward or backward store stage according to the degree of infection.

Those sheep which had sustained a massive infection were poor and weak, badly woolled, with misshapen feet and sores on the brisket. These sores are caused by prolonged contact with the ground when the animal spends most of its time lying down because the pain in its feet prevents it from walking and grazing.

Fig. 3.—Both the inner claws on the hind feet of this sheep are malformed, with horny deposits on the inner surfaces. The outer claws on each foot are clean and healthy although somewhat overgrown. In the right-hand picture, one of the mis-shapen claws has been trimmed with the secateurs exposing a pocket of infection in which the footrot organisms are still active.

In most cases one could assess the severity of the footrot infection by a glance at the sheep—a striking object lesson on the losses which this disease can cause in the sheep and wool industry.

DETECTING THE "CARRIERS"

To eliminate the "carriers" which would be liable to reinfect the flock at a later date, it is necessary to put all sheep "over the board" and carry out careful examination of every foot, using the knife and foot-trimming secateurs where necessary.

In some cases, the skin between the toes will be seen as a moist, hairless area—on a healthy foot this skin carries a growth of hair and is dry and clean. The moist area carries footrot infection.

In others, a foot may appear healthy with normal skin condition but one, or sometimes two, of the claws will be mis-shapen. Trimming with the secateurs often reveals a pocket of infection overgrown with aparently sound horn. This "pocket" is moist and has the typical footrot odour.

Sometimes a claw would have an unsightly bulge at one side. This might be due to "separated wall" which had allowed soil and dirt to accumulate between

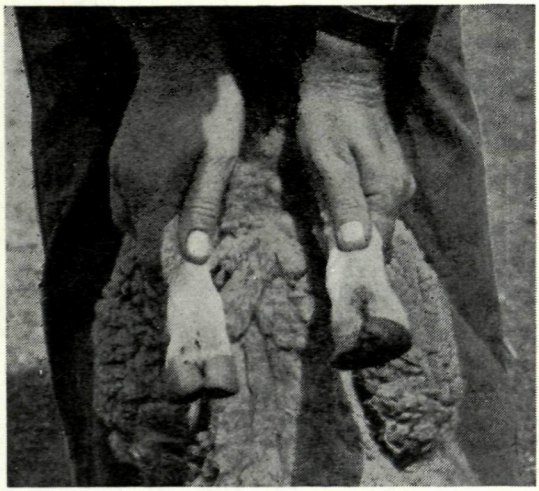

Fig. 4.—The foot on the left of the picture is clean and healthy and quite normal in appearance. The other foot has a mis-shapen claw with a moist infected patch extending into the coronet above the cleft of the foot. Later in the summer, the skin condition would probably clear up without attention but infection might still lurk in the malformed claw unless this was trimmed down and treated.

the horn and the sensitive portion of the foot—or it may conceal a pocket of footrot. In either case it needs to be opened up.

Another common result of footrot infection is an accumulation of horny material which is deposited on the inner face of the claws in the cleft of the foot. Often when this is snipped away, active footrot lesions are found beneath it.

Fig. 5.—Malformed feet resulting from footrot infection. Any such feet should be regarded with suspicion and trimmed severely to uncover pockets of infection which may have been hidden by the growth of horn.

TREATMENT

Dry weather offers a good opportunity to eradicate footrot from a flock. As the sheep are put over the board, the feet are trimmed and all the obviously sound animals are put through a footbath of 5 per cent. formalin solution or 10 per cent. bluestone solution. They should be held in the footbath for about 15 minutes before being turned out, preferably into a spelled paddock.

Infected animals and any doubtful cases, should have the feet thoroughly pared down to expose any pockets of infection, and should then be given the footbath treatment and placed in a quarantine paddock that is securely fenced to prevent them from mingling with the "clean" flock.

Where possible, it would be advisable to dispose of the obvious carriers and "suspects", either by using them as "killers" or selling them for immediate slaughter.

This is a short cut to eradication of the disease from the flock and has everything to recommend it.

Fig. 6.—Members of the "footrot school" trimming and examining the feet of sheep from a footrot-infected flock.

Alternatively, the footrot-infected animals could be treated by periodical foot-paring and footbath treatments, but no sheep should be transferred to the "clean" flock until they have passed a probationary period in a special paddock and been passed as healthy on two separate inspections with a month between them. Any long-standing or severe cases are better slaughtered, as they remain a potential source of infection.

The "clean" flock should be given periodical inspections and the foot-paring and footbath treatments repeated as frequently as possible to guard against animals which have carried concealed infection.

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