Progress in the control of footrot

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Seven years ago, action was taken for the first time in Western Australia for the control of footrot in sheep, and a good deal of progress has since been made. This work began in a small way for the purpose of preventing the spread of infection through markets, but it gradually gained momentum to reach its peak in 1955, and has now developed into an organised campaign for the total eradication of the disease.

Until about 15 years ago, it was the general belief that footrot was not amenable to control, since it appeared that sheep had only to be taken to areas of high rainfall and they would inevitably become affected. This belief was dispelled by the work of Beveridge, who, in 1941, was able to show that the infection is carried in the feet of the sheep where it is able to persist for a long period, but that it is unable to survive for more than about a week in the soil. Thus, by removing the carriers from an affected flock and transferring the remainder to a spelled paddock, it is possible to eradicate the disease, and furthermore a flock that is free of footrot will remain free indefinitely no matter how wet the conditions may be, provided no infection is introduced from an outside source. This knowledge has provided the basis for successful eradication.

**MARKET INSPECTIONS**

The control measures employed in Western Australia rest, in the first place, upon the regular inspection of markets, supported where possible by inspections of individual flocks. Quarantine is imposed wherever footrot is found to exist and it is maintained until the flock has been freed of infection. While a property is under quarantine no sheep are permitted to be removed from it except for the purpose of slaughter and they must be consigned either to the quarantine yards at Midland Junction or meatworks at Fremantle or Albany.

It is the purpose of these restrictions to protect clean flocks from infection and it would obviously serve little purpose to free a flock of the disease at considerable effort and expense and then to allow it to become re-infected by the indiscriminate purchase of sheep in the open market.

**QUARANTINE YARDS**

The quarantine yards at Midland Junction, which provide the main outlet for
sheep from affected properties, have proved of great assistance in this respect. They are served by a separate railway siding as well as unloading ramps for road vehicles, which ensures there can be no contact either direct or indirect between known affected sheep and the sheep that may be purchased by graziers in the main saleyards. In addition, both rail and road vehicles are required to be thoroughly cleansed at washing bays provided for the purpose before they may be used for the transport of other sheep, and there are similar facilities at Fremantle and Albany. The greatest risk, however, lies in the purchase of affected sheep rather than from infections contracted during transit.

In the early stages of the campaign it was the custom when quarantines were imposed to provide the flock owner with full information and advice upon the application of control measures, but it soon became apparent that he could not be left to tackle the problem alone, and that the guidance and assistance of extension officers was necessary for success.

**SUMMER ERADICATION**

Emphasis has been placed upon summer eradication when, under the dry conditions which then prevail, the disease has ceased to spread and the percentage of affected animals has fallen to its lowest level. Summer eradication programmes, in which the majority of the affected flocks have participated, are organised in all districts and each of these flocks must receive a detailed examination. Every sheep must be turned up and every foot examined for the presence of infection.

Particular attention is paid to sheep with overgrown, misshapen feet which may contain active lesions or hidden pockets of infection, as well as to sheep with moist hairless areas between the digits. These are the carriers of infection and, if retained in the flock, they will give rise to a further outbreak in the following spring.

They must be removed and segregated either to be sold for slaughter, which is encouraged since it results in the immediate elimination of infection from the property, or to be held as a hospital flock for curative treatment.
Fig. 3.—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.

This treatment involves thorough paring of the feet so as to uncover all infected surfaces, followed by repeated immersion in a formalin footbath or painting with chloromycetin or cetrimide, both of which have proved very effective.

The clean or unaffected portion of the flock is passed out through the footbath into a spelled paddock and a further inspection is made about a month later to make doubly sure that no carriers have escaped detection.

Sheep from the hospital flock, when cured, are returned to the main flock after a period of observation and those that do not respond to treatment are sold for slaughter. The flock is then kept under observation during the following winter and spring and it must remain free of footrot throughout this period before a release from quarantine is granted.

The bulk of this eradication work is carried out by District Stock Inspectors. It is a hard, exacting task and it is only necessary to miss a single carrier for a breakdown to occur.

Some owners have preferred to eradicate the disease by selling the whole of the flock for slaughter and restocking with clean sheep from dry inland areas after spelling the property for a fortnight, but difficulties associated with the purchase of suitable replacements have made this practice less attractive during the past couple of years.

SOME ENCOURAGING FIGURES
Since the campaign began, 556 flocks have been found with footrot and 474 of them have been freed of the disease and, with a few exceptions, have since remained free. At Geraldton where there were 39 affected flocks the disease has been completely eradicated, while in the Bridgetown area only 18 of the 189 flocks which were found to be affected still remain under quarantine restriction, and similar if less spectacular results have been obtained in other districts. 139 flocks were included in the summer eradication programme for 1956 and 98 of them were freed of footrot. In some instances where eradication was not achieved there was lack of co-operation on the part of the owners, while in others, failure was ascribed to defective fencing or incomplete mustering, but there can be no doubt that carriers were missed in some flocks.

There are now 82 properties under quarantine, at least 74 of which will be included in the 1957 eradication programme, and it is confidently expected that a further substantial reduction of the number of affected flocks will result by the end of the year.

The only discordant feature has been the occurrence of new outbreaks, 59 of which were reported in 1956, indicating there are pockets of infection still to be revealed. It is reasonable to anticipate, however, that these outbreaks will progressively decrease as the disease is eradicated from the known infected flocks and new infections are eliminated as they are detected.

I think it can now be claimed that the disease has been brought under control and that its incidence can be reduced to a level where it will cease to be a serious problem. The total eradication of an infection which may be dormant in the feet for several years only to become active upon exposure to wet conditions is, however, a very difficult assignment and it remains to be seen whether it can be achieved.

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