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The sheep itch mite - (Psoregates ovis)

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THE SHEEP ITCH MITE

(Psorergates ovis)

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THE sheep itch mite, Psorergates ovis, was recorded in Western Australia for the first time in 1948. This parasite was first detected in New South Wales in 1940 and since that time it has been reported from all of the other States. There is reason to believe, however, that the mite has existed in Australia for many years and that its recognition has been delayed owing to the similarity of the symptoms produced to those resulting from infestation with body lice (Damalinia ovis). The presence of itch mite had been suspected for some considerable time in this State, but a definite diagnosis could not be made until the parasites were recovered from affected sheep and positively identified.

The itch mite inhabits the superficial layers of the skin, setting up a chronic irritation which causes the affected sheep to rub against fence posts and other objects and to bite at the wool, so that the fleece presents a torn and ragged appearance and in advanced cases becomes badly cotted and consequently reduced in value. The itch mite is not visible to the naked eye and its presence can only be detected by the microscopic examination of scraping taken from the skin after the wool has been closely clipped or shaved.

Lime-sulphur dips have proved effective for the control of the parasite, and it has been shown that a single dipping if carefully carried out will completely eradicate the infestation.

The condition has so far only been observed in Merinos.

SYMPTOMS

The symptoms of itch mite infestation are very similar to those produced by body lice and a careful examination is necessary in order that the two conditions may not be confused.

In consequence of the irritation caused by the mites there are symptoms of rubbing and biting at the wool so that the fleece becomes torn and ragged and loose tassels of matted wool may be observed hanging from the sides, flanks and thighs. The degree of irritation appears to be mild and it may be necessary to watch sheep at rest in the yards very closely before any rubbing or biting is observed. Occasionally strands of wool may be found adhering to the teeth or twisted round the horns, and evidence of rubbing may be found on fence posts, logs and trees in the paddock.

The earliest symptom of the condition consists of a small whitish patch on the side or flank, from which the infection spreads in all directions but more commonly towards the hindquarters and over the thighs. The infestation apparently spreads very slowly, and three to four years may elapse before the condition becomes generalised.

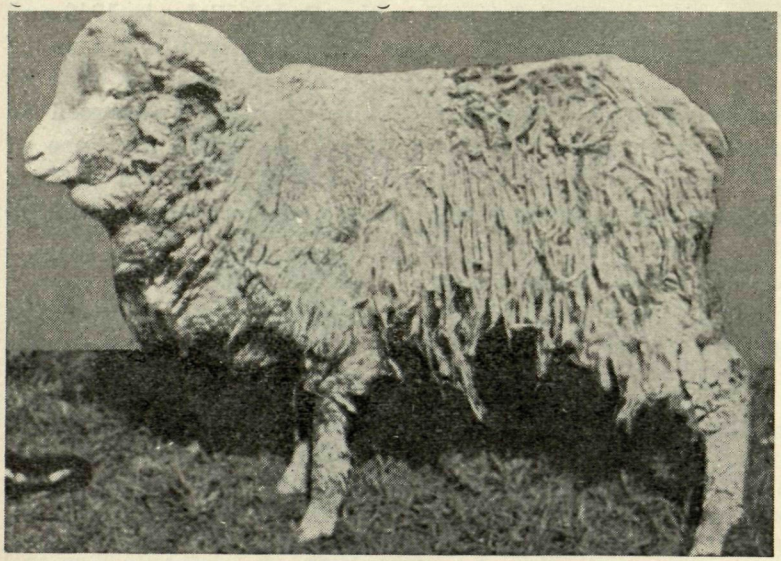
The affected wool becomes stringy in appearance and has a dry spiral-pointed tip. It contains particles of crumbling scurf and may show a slight yellow discolouration. The staple is tender and can readily be broken anywhere along its length. In advanced cases the wool becomes badly cotted and the fibres can be torn apart only with difficulty. Sheep in this condition may be difficult to shear and the value of the fleece is seriously depreciated.

COURSE

The spread of itch mite infestation is slow and insidious and several years may pass before it reaches serious proportions in a flock; thus on some properties a few sheep only may be observed to be affected whereas on others up to 20 per cent. may show evidence of infestation. In one flock. which was kept under observation in New South Wales, 15 per cent. of the sheep were found to be affected after a period of eight years.

Sheep of all ages may become affected, but owing to the slow rate at which the infestation spreads, it is most frequently observed in older animals, among which the most serious cases are always found.

The condition is believed to be spread by the direct contact of infested with non-infested animals and to take place soon after the shearing while the wool is short which favours the migration of the parasites. The migration of the mites from woolly sheep appears to be unlikely.



Figs. 1 and 2.—An advanced case of itch mite infestation. Note the torn and ragged appearance of the fleece and the loose tassels of wool hanging from the flanks and hindquarters

DIAGNOSIS

When, in the absence of lice, there are symptoms of rubbing and biting with consequent damage to the fleece, itch mite infestation should be suspected. It should not be difficult to check on the presence of lice since these parasites, although small, will readily be detected when the fleece is opened and examined in bright sunlight.

For the detection of itch mite the microscopic examination of skin scrapings is necessary. The mites are not always present in large numbers, and the examination of a number of scrapings taken from different sites on the body may be necessary before a positive finding is obtained.

When the condition is suspected and confirmation is desired, a sheep showing typical symptoms should be forwarded to the Department of Agriculture for examination.

CONTROL

Experience has shown that itch mites may be controlled by the use of

The Merino is the most famous breed of sheep in the world.

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His origins are Royal, too. In 1804, John Macarthur, of Camden Park, New South Wales, bought five rams and one ewe from the Merino stud flock of King George III for breeding with flocks brought to Australia a few years earlier.

The King — known as "Farmer George" took a lively interest in Australia's early sheep-breeding experiments; he presented five more Merinos to Samuel Marsden, pioneer missionary-cum-pastoralist, of Parramatta.

Improving the clip. Just as men like John Macarthur and Samuel Marsden helped pioneer Australia's sheep and wool industries, scientists today are doing their utmost to assist the grazier with problems of sheep husbandry.

Thanks to Shell, blowfly strike, the scourge of the sheep-run, is now being controlled through the use of insecticides.* These Shell products are proving to be the most effective preventives available to the grazier for blowfly control.

Once again we find SHELL products serving the man on the land in his battle against pests which affect wool production.

* *aldrin*
* *dieldrin*

Fig. 3.—The same sheep viewed from the rear. Note the broad band of wool along the middle of the back which the animal is unable to reach and which appears to be unaffected. The tassels of loose wool hanging from the thighs are very obvious

lime-sulphur dips, and, provided it is thoroughly carried out, a single dipping may completely eradicate the infestation from a flock. Dips containing 1 per cent. polysulphide sulphur are employed and these may be prepared from concentrated lime-sulphur solutions now available on the market and commonly used as orchard sprays. These concentrated lime-sulphur solutions usually contain 20 per cent. polysulphide and when used in a dilution of 1 in 20 will provide a solution of the required strength for dipping. To this must be added a wetting agent such as Agral 3 in the proportion of six ounces to 100 gallons, which will ensure that the dipping solution penetrates and thoroughly wets the fleece. Best results will be obtained by dipping three to four weeks after shearing while the wool is still short, but since lime-sulphur solutions are very irritant to open wounds, treatment should not in any case be undertaken until shear-cuts have completely healed.

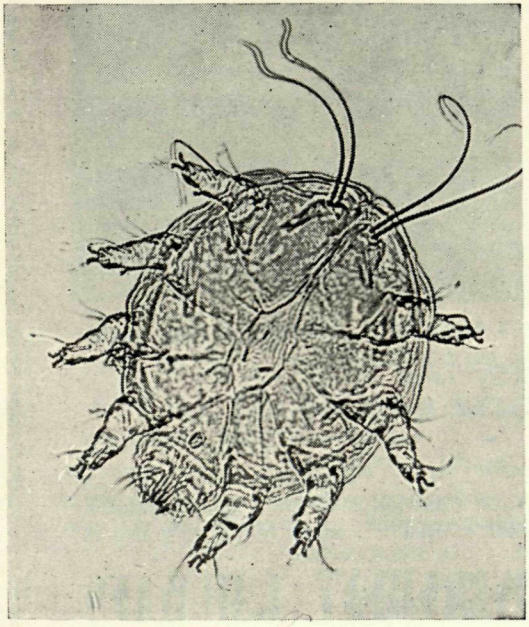

Fig. 4.—The Sheep Itch Mite—female—highly magnified. The parasite is too small to be seen with the naked eye

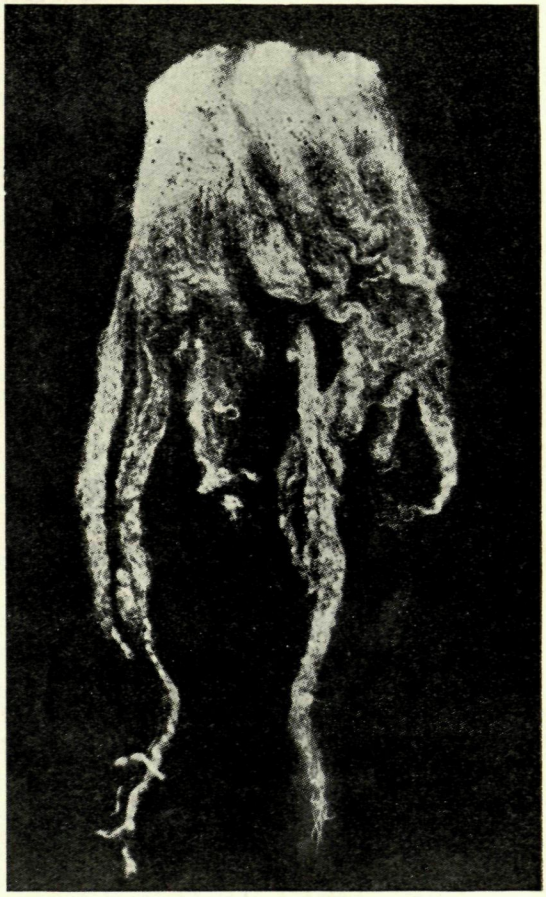

Fig. 5.—A typical sample of wool from a sheep infested with itch mite. Note the stringy appearance and spiral tip

The dips in general use for the control of tick and lice in sheep are not highly effective for the control of itch mite.

Arsenical dips however will destroy large numbers of the mites but without effecting complete eradication and, on properties where dipping in an arsenical preparation is practised as a regular annual routine, itch mite infestation is never likely to become a serious problem.

BULL REGISTRATION

The Director of Agriculture (Mr. G. K. Baron Hay) has drawn attention to the requirements of the Dairy Cattle Improvement Act, relative to the registration of bulls.

The Act provides that all bulls in the South-West Division of the State must be registered, with the exception of pedigree beef strain animals kept solely for beef production, which may be exempted on application to the Director of Agriculture.

Certified Pure-Bred bulls are registered on payment of a fee of 10s. for life, but Grade bulls must be registered annually and a fee of 5s. paid with each application.

Registrations of Grade bulls were due on the 1st of January, 1956, and the Act stipulates that owners who have not complied with the regulations by January 21st, are liable to a penalty not less than £20.

The Department should be notified immediately of the death or transfer of any registered bull.