

Sheep Scab

The sheep scab mite *Psoroptes ovis* arrived in Australia with the First Fleet (1787-88) and was the cause of the most disastrous livestock disease for the 19th century sheep owner and indirectly the Australian general public. Wool production was the only real source of income and any disease that reduced this was of prime importance for the expanding colonies.

The mites feed on skin debris and exudate. They cause intense irritation to the sheep, which rub and bite themselves causing intense damage to the fleece and producing moist yellow scabs. Sheep lose condition and many deaths were recorded. In his 1865 Report, the Victorian Chief Inspector of Stock estimated that the annual financial loss to the colony was over £500,000.

The occurrence of sheep scab led to two streams of innovation in the Australian pastoral sector: one technical, the other organisational. In the first, pastoralists developed new and more effective acaricides that in combination with such developments as the race and dipping troughs meant that they could treat large numbers of sheep more efficiently. In the second, sheep scab was directly responsible for the first Australian legislation that was aimed at controlling an animal disease.

Early treatment involved dressing with a mercurial ointment mixed with lard, and worked into the skin by hand. The sheep were sometimes dipped into strong limewater to soften the scabs before dressing. Then reasonable results were reported by dipping sheep into crude sulphuric acid (one part of acid to 80 parts of water). By chance, a grazier added a small portion of tobacco into the mixture. The acid helped the release of nicotine that when combined with the sulphate destroyed the mite. The treatment was later modified to being a mixture of sulphur and lime. Sheep were treated by being totally immersed twice for up to a minute in dipping vats, after the mixture had been heated by boilers to between 100-110°F (37-43°C).

Even then, although it was possible to cure the trouble, it did not eradicate the disease. Some owners took no preventive steps such as proper supervision and complete treatment of their flocks, there was a lack of fencing, and communications were poor.

Legislation was first enacted in New South Wales in 1832 and evolved with more and more powers being granted well into the 1860s. Under these Acts, full-time inspectors were appointed, and they could issue warrants to inspect, detain, seize and destroy infected sheep. Infected sheep had to be kept under constant supervision by day and enclosed by night. Travelling sheep had to be branded, and notice of intention to drive sheep across another person's land had to be given.

Once the legislation was enacted and enforced, eradication was rapid with the disease being eradicated from the Australian continent by 1896; a remarkable achievement.

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June 2002