

Monitoring sheep for lice

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Regular monitoring of mobs for lice and early detection when an infestation begins are key elements of any well planned lice control program. Careful inspection of sheep before purchase or introduction to a property can help prevent new infestations, save production loss, reduce residues and save costs by avoiding unnecessary treatments.

When to check for lice:

- All mobs should be carefully inspected for lice at least twice each year. When sheep are yarded for drenching, crutching, marking and shearing or other management procedures are good times. In addition, any sheep seen with rubbed fleece or pulled wool during routine paddock inspections should be closely checked as a matter of urgency. It is also a good idea to ask your shearers and shed hands to look out for lice at shearing. Make sure to check EVERY mob on your property, including the killers and rams.
- All newly purchased or agisted sheep, and those returning from other properties should be inspected. Remember to closely check rams. As lice are extremely difficult to find when in low numbers, even if lice are not seen, it is advisable to isolate newly introduced sheep from the rest of the mob until you are sure they are free from lice.
- Any stray sheep found in the mob or returned from neighbours should be closely examined. Some owners prefer to dispose of straying sheep rather than return them to the mob to avoid the risk of lice.

Lice are difficult to find soon after shearing. Even if sheep have not been treated, it is unlikely that lice will be easily found less than three months off-shears. If sheep have been treated but lice not eradicated, it may be more than six months before lice can be easily found.

How to monitor for lice

Look for sheep showing signs of rubbing or biting at their fleece.

Rubbing is a very powerful indicator of infestation and sheep will begin to rub with quite low lice numbers. If sheep are not rubbing, even if lice are present they will be in such low numbers that it will be almost impossible to find them by random inspections. Therefore, time is most efficiently used by carefully going through the mob trying to identify any sheep with rubbed or pulled wool.

Signs of rubbing are most likely along the sides of the sheep as this is where most spread of lice between sheep occurs and where lice are most prevalent. This is also the area on the body that sheep can easily reach to bite at the wool. Pulled strands of wool on the flanks from sheep biting is often an early indication of lice.

Tufts of wool caught on fences, trees or other structures usually indicate that sheep are rubbing and should be mustered for inspection.

If a rubbing sheep is seen, closely examine this sheep to see if lice can be found. Sheep rub for a number of reasons, so it is essential to see live lice to confirm an infestation. Other causes of rubbing include grass seeds, fleece rot, lumpy wool, flystrike and itchmite. Sheep that are frequently walking through bush or long grass, sheep with tender wool and some breeds that shed their fleece, may also appear to be rubbing. The wool rub module in LiceBoss can help to determine other causes of rubbed fleece.

What to look for

Sheep lice are small insects 1 to 2 mm in length with a broad reddish head and a cream coloured body. Adult lice have reddish brown stripes across the body but these stripes are absent in young lice (see Figure 1). Do males have a pointier body?

If your eyesight is good you will be able to see lice on sheep. However, if you need glasses to read a telephone book you will also need them to see lice.

Two other species of lice can sometimes also infest sheep but they are relatively rare. These species are sucking lice, usually found on the legs, the face or in rams, on the scrotum. They are generally larger in size than the common sheep louse and appear bluish in colour. Itchmites can also cause rubbing but are too small to be seen without a microscope. Itchmites are also rare because of widespread use of ML drenches (e.g. ivermectin) which are effective against them.

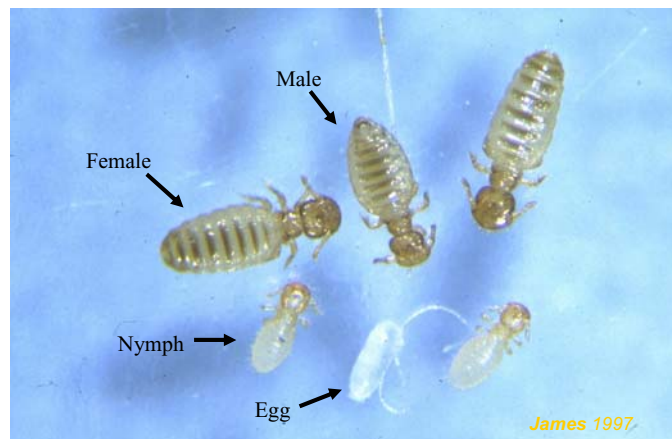


Figure 1. Sheep lice - females, male, nymphs and egg.

Inspecting a rubbed sheep for lice

Lay the sheep on its side in a well lit position, part the wool and look for lice.

If you wear glasses for reading make sure you wear them when looking for lice. A magnifying glass can help.

Check at least 20 wool parts on any rubbed sheep. Parts should be at least 10 cm long. The more sheep you inspect, the more chance you have of finding lice if they are present.

Once you have found one live louse you can stop. There will be many more lice that you can't find and all sheep should be treated after the next shearing.

Where to find lice

Shearing severely reduces louse numbers. Sixty to eighty per cent of lice may be directly removed by shearing and many more will be killed soon after by exposure to environmental effects, particularly high temperature and high solar radiation. After shearing, most lice will be found in poorly shorn patches where they can escape the effects of the weather, particularly in the neck folds, on the lower flanks and in longer wool left at the top of the legs.

When the fleece gets longer, lice may be found anywhere on the woolled areas of sheep. They tend to be in highest numbers along the sides and sometimes on the back.

Most lice are found near the skin. However, they move away from the skin and up into the wool when the fleece is shaded, for example when sheep are in a shed or in close contact with other sheep. This is how they spread. When the fleece is parted in bright light, lice will tend to move away from the light, into the wool.

What is the probability of finding lice?

In the early stages of an infestation only a few sheep in the mob will have lice. To find them you have to first select one of the infested sheep and then find the lice on that sheep.

Selecting the right sheep – If 10% of sheep in the mob have lice and you select one for inspection at random there is only a one in ten chance of selecting an infested sheep. We now know that sheep can start to rub with as few as 100 lice. Therefore selecting a rubbing sheep for inspection greatly increases the likelihood of finding lice if they are present.

Finding lice on rubbed sheep – If a sheep has 100 lice, this is equivalent to about 0.05 lice per parting. Because lice occur in groups and are not randomly spread over the sheep, inspecting even 20 parts will only give about a 60% chance of finding lice on this animal. Inspecting more rubbing sheep will significantly improve the chance of detecting an infestation.

The bottom line – Looking for sheep starting to rub greatly improves the chance of finding lice if they are present, but even if lice are causing rubbing you may have to look very carefully to find them.

Lice detection test

Australian Wool Innovation, NSW Department of Primary Industries and CSIRO have developed a test that uses wool grease collected from combs and cutters at shearing to help diagnose lice infestation. This test will be offered commercially as a laboratory test by NSW DPI from the end of 2007.

What if lice are found?

If possible, separate the infested mob from other sheep to prevent further spread.

All sheep on the property should be treated at the next shearing. Depending on the level of infestation present and time until shearing it may also be desirable to apply a long wool treatment. Consult the LiceBoss Long Wool module to help with this decision. Remember, if a long wool treatment is used it will control but not eradicate lice. All sheep will need to be treated again after they are shorn.

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