



# Victorian Farmers Federation Livestock Group

## Livestock Factsheet

### » Body Lice in Sheep

Sheep body lice (*Bovicola ovis*) are responsible for most lice infestations of sheep and cost Australian sheep producers more than \$120 million a year. While no official statistics are available on the occurrence of sheep lice in the Australian sheep flock, anecdotal evidence supports that the occurrence is high, and that many sheep producers will have sheep lice issues in some years.

The body louse is a small insect around 1-2mm in length. Young lice (nymphs) are cream-coloured with a red-brown head, while adult lice have reddish-brown stripes across their body. Lice feed on dead skin of sheep, lanolin, skin bacteria and sweat gland secretions. Lice do not suck blood or eat the wool fibres, but do cause thickening of skin.

Body lice are a common problem in Victorian sheep flocks and cause significant economic loss as a result of;

- Decreased wool quality and quantity
- Treatment costs (both chemicals and labour)
- Limited market opportunities (it is an offence to sell lousy sheep in Victorian saleyards)

### Key Points to Remember:

Effective treatment of all sheep in the flock is necessary to fully eradicate lice. Lousy sheep that have been treated may not show signs of infestation for up to nine months after treatment. Usually this is due to the treatment not eradicating all lice.

Lambs pick up lice quickly from infested ewes. When selecting a treatment product, consider selecting a treatment for ewes as well. Depending on the product, it can take between 2 and 18 weeks after treatment for lice to die. If lambs are born during this period, they can become infested and reinfest ewes.

Always read the label and consider residues and withholding periods when selecting and using chemicals for control and eradication of lice.

Remember, selling lousy sheep through saleyards is illegal.

### How lice are Spread

Commonly lice move from infested sheep to clean sheep during direct contact. Lice move from the tip of the fleece and will usually spread during;

- Joining (introduction through rams)
- In yards or races
- During transport
- In sheep camps
- Introduction of new stock to a property (either purchased in or strays)

Transmission of lice through contact with infested wool on fences is unlikely, however in sheltered areas lice may survive in greasy wool for a couple of days.

Lice are sensitive to temperature and humidity and most will die soon after being removed from sheep. Research work has shown that some lice can survive for up to a month in favourable conditions.

### Prevention

There are a number of steps that can be carried out on farm to prevent lice infestation. Carrying out best practice management and biosecurity strategies is the best way to prevent introducing lice to your flock as well as other sheep diseases.

- Ensure boundary fences, timber plantations, creek crossings etc. are maintained and are "sheep-proof" to minimise strays and interaction of animals between fences. Pay particular attention to timber or tree plantations where stray sheep can remain undetected and intermingle with your sheep.
- Consider introducing buffer zones along boundary fences. This will allow you to deal with stray sheep before they are introduced to your own sheep.
- Work with your neighbours to improve fences and discuss strategies to prevent and manage lice problems in your area. Neighbours should have a "no stray" policy. Should a neighbour find one of your sheep on their property, ask them not to put it back over the fence but contact you for collection. This means you can quarantine stray animals before re-introducing them to your flock.
- Always inspect sheep before purchasing new stock and ask for a National Sheep Health Statement.
- Isolate new sheep on arrival until the next shearing to minimise the chance of introducing lice (or other diseases) to your flock. Keeping records of stock movement around the farm can be effective in managing the risk of spreading lice throughout your flock.
- Shearers can transfer (adult) lice inadvertently on their moccasins for up to 10 days after they have worked on properties with heavy lice infestations. There is a low probability of this occurring and should not be your main focus of prevention. However microwaving moccasins for 5 minutes can minimise the risk of transfer

### Diagnosis

It can take around 5-6 months for newly infested sheep to develop signs of a lice infestation. The first sign of lice infestation is usually rubbing sheep (i.e. on fences). Once sheep are at the "rubbing" stage, it is often a sign that lice are in high numbers and treatment should occur at the first opportunity.

### Checking for Lice

- Check all mobs at least twice a year (i.e. during crutching and before shearing) and check any sheep with rubbed or pulled wool.
- It is difficult to see lice in small numbers on sheep. The best time to see lice is immediately prior to shearing.
- Because of their small size, you will need glasses to see them if you need glasses to read.
- You can check for lice by parting the wool in a number of places where sheep have rubbed or where the wool is matted.
- Make a number of parts (about 10) on each side starting at the neck and working along the side of the sheep to thigh.
- Do this in bright sunlight, and you will see the lice move away from the light.
- On shorn sheep, protected areas around the folds on the neck are the preferred areas. In woolly sheep, the mid-sides will generally hold the greatest numbers.
- Wool damage is usually only obvious once there is at least three months' growth of wool and significant lice numbers.

### Treatment

The best time to treat sheep for lice is soon after shearing, using a plunge dip. This allows the best chance of eradication and also minimises residue in wool (remembering wool processors will not tolerate chemical residues).



Opportunities to eliminate lice are “off-shears” (0-24 hours after shearing) or in short wool (1-42 days after shearing). Use of long-wool backliners should only be considered as a control tool to limit further wool damage before shearing, but be aware of the wool harvest intervals. If you are going to the expense of treating lice, ensure you don't leave any sheep behind when mustering and that you treat all sheep.

## Backliners

	When to use	Advantages	Disadvantage	Notes
Off-shears Backline	Immediately after shearing, <24 hours unless stated otherwise	less labour intensive	- slow to kill - high chemical cost - effectiveness reduced in sheep not cleanly shorn	If used properly some can achieve eradication
Long-wool Backline	6 weeks – 10 months' wool	- Less labour intensive - low maintenance - no discharge of used dipwash	- slow to kill - high chemical cost - potential for high chemical residue in wool	Apply evenly from poll to tail
Jetting	Used as a control method until lice can be eradicated at shearing.		Control only	

## Dips

	When to use	Advantages	Disadvantages
Plunge Dip	3 weeks off-shears	Very effective if used correctly	- Expensive to set up own facilities - Labour intensive - Bacterial infection can be spread
Shower Dip	2-3 weeks off-shears	Less labour intensive	- Generally less effective - Expensive to set up own facilities - Difficult to achieve necessary saturation for maximum effectiveness - More chemical exposure for operator - Method not regularly used

## Take home messages:

- Sheep body lice cost Australian sheep producers more than \$120 million a year.
- Lice move commonly from infested sheep to clean sheep during direct contact.
- It can take around 5-6 months for newly infested sheep to develop signs of a lice infestation.
- Best practice management and biosecurity strategies are the best way of preventing introducing lice to your flock.

Further details on sheep lice treatments and chemicals for controlling lice can be found on the Victorian DPI website. See the Victorian DPI website for portable plunge dip contractors in Victoria and more information on sheep lice treatments.

## Links

**Australian Wool Innovation - LiceBoss**

[http://www.wool.com/Grow\\_LiceBoss.htm](http://www.wool.com/Grow_LiceBoss.htm)

**AWI - LiceSense (pdf)**

[http://images.wool.com/pub/2011-08-08\\_LiceSense\\_A5\\_Manual-v3.pdf](http://images.wool.com/pub/2011-08-08_LiceSense_A5_Manual-v3.pdf)

**Department of Primary Industries Victoria**

<http://www.dpi.vic.gov.au/agriculture/pests-diseases-and-weeds/pest-insects/lice>

**Department of Primary Industries New South Wales**

[http://www.dpi.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0005/318704/Sheep-lice.pdf](http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0005/318704/Sheep-lice.pdf)

**DPI NSW - Plunge Dip Management**

[http://www.dpi.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0014/421502/Sheep-Plunge-Dip-Management.pdf](http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0014/421502/Sheep-Plunge-Dip-Management.pdf)

**Primary Industries Research South Australia**

[http://www.pir.sa.gov.au/biosecuritysa/animalhealth/disease\\_control/sheep/lice\\_control](http://www.pir.sa.gov.au/biosecuritysa/animalhealth/disease_control/sheep/lice_control)

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