MANAGING LICE

For strong wool sheep, lice infection is a nuisance more than a significant financial cost. However, for fine wool sheep, the financial toll is much greater, due to the impact on wool quality and yield and the pelt.

There are also animal welfare issues associated with lice infection, which are covered in New Zealand’s Animal Welfare Act 1999 and health and safety requirements around handling and disposing of lice treatments and containers.

This factsheet provides a practical guide to:
- understanding the lice lifecycle and optimal times to target them
- treatment options – chemical and non-chemical – available.

AN INTRODUCTION TO LICE

Known as the sheep body lice, biting lice or chewing lice, *Bovicola ovis* is a 1.5-2.00mm long, yellowish-brown wingless insect. They do not fly or jump; they only walk.

The female lives an average of 4-6 weeks and lays about 30 eggs in her lifetime. Eggs are laid on wool fibres, within 12mm of the skin surface. Lice prefer temperatures around 35-40°C and, while eggs can tolerate the dry, they don’t survive high humidity or saturation.

After 9-11 days, the eggs hatch into nymphs and another 21 days later, they become adults. The complete egg-to-egg lifecycle takes 34-36 days and is spent entirely on the sheep.

LIFE CYCLE OF LICE

SEASONAL BEHAVIOUR OF LICE

Lice populations are generally highest in autumn through to late winter and decline in summer.

Transmission

Lice are transferred by very close contact between sheep.

Within a flock: Lice spread slowly, except when sheep are in poor condition. Well-fed and well-conditioned sheep are less susceptible to lice than undernourished poor-conditioned sheep.

Ewe to lamb: A lice-infected ewe will infest her lamb within the first 24 hours. It’s therefore important to ensure ewes are lice-free before lambing. If infested ewes cannot be treated for any reason, then it is imperative lambs are dipped as soon as practical – be that weaning or shearing.
**LICE PREVENTION AND TREATMENT**

**Do you have a lice problem?**

Ask yourself:

1) Have signs of lousiness been obvious over winter?

2) Are lice treatments being applied for peace of mind or are you treating an actual problem?

Every summer and/or autumn just before shearing, select and inspect at least 10 of the lightest sheep in your flock, or those sheep showing obvious signs of rubbing their fleeces. Pay extra attention to the midline of the back and shoulders, and under the neck.

**The importance of shearing**

Shearing can remove up to 80% of lice, depending on the closeness of the cut. A high lice kill at shearing can be further enhanced by off-shears lice dipping.

**Using chemicals to treat lice**

Dipping provides the most effective, persistent protection against on-going lice challenge and the best time to treat is when lice numbers are at their lowest - usually in summer and/or immediately off shears.

See Lice Prevention Treatment Decision Tree on back page for recommended treatment scenarios, based on level of lice infestation and wool length.

**Tips for chemical use**

- Use effective chemicals and do not use the same chemical year after year.
- There may be benefit in lice control by using two actives together where the actives target different stages of the life cycle.
- Where complete saturation is achieved in a plunge or shower dip, there is no advantage in using more than one active.
- To reduce selection for resistance, do not use two actives that both target the same life cycle stage at the same time.
- Apply all products strictly as per label.
- If treatment for flystrike prevention and lice control is required at the same time, use chemicals from different chemical groups.
- Maintain accurate records regarding all treatments.
- Dip each mob at the most appropriate wool length and time for that mob. Focus on on-farm eradication of lice.
- Do not mix treated sheep with untreated sheep.

**Long wool emergency treatments**

Large lice burdens invariably show up at the worst time for treatment – in ewe flocks with more than 6 months’ wool growth, just prior to lambing.

You have two options:

1) Do nothing. Further wool damage will occur and lambs will become lousy.

2) Apply a long-wool lice knockdown treatment to the ewes. (See back page.)

No long wool treatment will eradicate lice, rather it will simply prevent further fleece damage and reduce the numbers of lice available to transfer to lambs. Both ewes and lambs should still be considered lousy and should be treated when next shorn. Use a product from a different chemical group to that used as the long wool treatment.

A review of previous lice control measures should also be carried out and improvements made.

*The best time to treat lice is when lice numbers are at their lowest, which is usually in summer and/or immediately off shears.*
**DISPOSAL OF DIP CONCENTRATES, CONTAINERS AND USED WASH**

Apply and dispose of all products strictly as per label. Disposal must comply with the Resource Management Act 1991 and regional council regulations.

**Disposal of containers and unwanted concentrate**

The Agrecovery Rural Recycling Programme is a free nationwide collection and disposal system for unwanted and expired agrichemicals. Visit [www.agrecovery.co.nz](http://www.agrecovery.co.nz) for contact details.

### RELATED RESOURCES

- Managing flystrike and lice resource book  
- See separate fact sheet for information on Flystrike  

**More information**

For further information freephone Beef + Lamb New Zealand on 0800 BEEFLAMB (0800 233 352) or email enquiries@beeflambnz.com or visit [www.beeflambnz.com](http://www.beeflambnz.com)

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Lice Prevention & Treatment Decision Tree

Have you identified lice in your flock?

Review previous years’ lice control measures and set up new plan

Long wool

Off-shears pour on

SPYN Spinosad
IGR+ NEO Triflumuron + imidacloprid
IGR Diflubenzuron
SP Cypermethrin
Alphacypermethrin
Deltamethrin
IGR + SP Triflumuron + cypermethrin
Diflubenzuron + deltamethrin

Pour on

SPYN Spinosad
SP Cypermethrin
Alphacypermethrin
Deltamethrin

Jetting

SPYN Spinosad
SP Cypermethrin
Alphacypermethrin
Deltamethrin

Lice resistance: Status of actives
- SP resistant lice widespread in Australia and NZ
- IGR resistant lice widespread in Australia; NZ situation unknown
- OP resistant lice extremely rare
- Spinosad & imidacloprid – no resistance recorded

Pour-on off shears and up to 3 months wool

SPYN Spinosad
IGR Diflubenzuron
SP Cypermethrin
Alphacypermethrin
Deltamethrin
IGR + SP Triflumuron + cypermethrin
Diflubenzuron + deltamethrin

Jetting 1-3 months wool

IGR Diflubenzuron
Triflumuron
cyromazine +
diflubenzuron
SPN Spinosad
cyromazine +
spinosad
OP Propetamphos

N.B. Flystrike preventative jetting treatments with lice-effective products may aid in control of low-level lice population, but only if applied to breech and back

Pour on

Use different pour-on to that used off shears

Jetting/saturation

- Treatments must ensure lice are targeted
- Thorough wetting must be achieved
- Use different chemical type to that used off shears

SPN Spinosad
IGR Diflubenzuron
Triflumuron
OP Propetamphos

Autumn treatments

1-3 months wool

Maintain lice-free flock by:
- Quarantine treatment of bought-in stock
- Secure boundaries (ideally double fenced, so no sheep-to-sheep contact)
- Inspect flock for lice at key times: pre-tup, scanning, pre-lamb, shearing

Take action in the following situations:

- Monitor effectiveness of treatment
- Beware of lambs as potential source of lice
- Treat all stock within short space of time
- Rotate effective products

This decision tree is designed as a guide only. We recommend you get specialist advice from your vet or a qualified advisor.