



Sheep lice control for ewes and lambs

Garry Levot, NSW Department of Primary Industries and Peter James, University of Queensland

When lice are found on ewes that are soon to lamb, or have recently lambed, lice management strategies are more complex than those for a mob of similar age animals. This is because dipping pregnant ewes or ewes with lambs at foot is often not an acceptable management option and because backline treatments take at least 6 weeks to kill all lice and insect growth regulator compounds take even longer.

During this time, if there is contact with untreated lambs, there is the potential for lice to spread from the ewes to the lambs. Once the protective effect of the ewe treatment has worn off and if the lambs have not been treated, the lice can then spread back to the ewes to continue the infestation. Difficulties are compounded if lambing continues over an extended period.

In addition, louse control products are registered with a range of different claims. For example, they provide different periods of protection against new infestations, they vary in how soon after shearing they must be applied, and there are differences in whether or not they can be used on unshorn lambs and on what size or age lambs they can be used.

Selection of ewe and lamb treatments needs careful consideration to avoid starting a new infestation in lambs or failing to eradicate an infestation in ewes. Remember, whereas it should be possible to eradicate an infestation if sheep are treated according to label instructions after shearing, long wool treatments will only suppress, not eradicate, the infestation. Sheep treated with a long wool treatment remain a potential lice risk and all sheep treated in long wool need to be re-treated after their next shearing to eradicate the infestation.

Identifying the cause of the initial infestation in the ewes is also important. Purchased rams that are not adequately quarantined before joining can sometimes be the source of lice.

Considerations when choosing a product

There are a number of key considerations when checking short and long wool product labels for possible treatment options. These include:

The condition and health of the ewes

If dipping is contemplated prior to lambing, it is best carried out at least 6 weeks before lambing for two reasons. Firstly, it lessens the stress and health consequences of shearing and dipping late pregnant ewes, and secondly, it reduces the risk of treatment failure from carry over of lice to early born lambs. Some dip products specify that ewes heavy in lamb should not be dipped. Whereas fast-acting 'knock-down' dip products can eradicate an infestation within a day of treatment, insect growth regulator (IGR) dip products may require 18 weeks to control all susceptible lice (see the LiceBoss Note: [Sheep lice treatments—chemical group characteristics](#) or the [Products Tool](#) for a list of products in different chemical groups). If ewes are not in good condition, or if the imminent start of lambing excludes dipping as an option, a backline treatment must be used after shearing and these require 6 weeks (longer for IGRs) to remove all lice.

The time required to eradicate lice from the ewes before lambing

Unless lice are eradicated from ewes prior to lambing, there is a high risk that lice will transfer from ewes to lambs. Product labels contain restrictions such as mandatory isolation periods (time when treated sheep must not be mixed with untreated sheep) that apply in this situation. Mandatory isolation periods vary between products, but are 6 weeks for many backline products.



Some fast-acting dips may be effective in a shorter period, but it is generally unwise to dip ewes during late pregnancy. IGR dipping products require a longer time to control lice and it is recommended that lambs born to IGR-treated ewes be treated in the first 3 months of life.

Product choice in the ewe-lamb unit

Where possible, use the same method of treatment for ewes and lambs. Use of dipping products for ewes and backline products for lambs, or vice versa, may not eradicate lice because the protective effect of dipping may lapse before all lice on the backline-treated sheep have died. Dipping should only be conducted with ewes or lambs within 6 weeks after shearing. Treatment of either ewes or lambs with a long wool product (greater than 6 weeks after shearing) will reduce, but not eradicate, a lice infestation. These sheep must be retreated after their next shearing.

Lamb treatment claims

Products vary in whether or not they can be used on unshorn lambs and on what age/size lambs they can be used; always check the label claim before choosing a product. One product containing a neonicotinoid insecticide can be used on unshorn lambs up to 2 months of age and some IGR backline products can be used on lambs up to 3 months of age. Label instructions indicate that the macrocyclic lactone backliner should only be applied to shorn lambs and not be used on lambs less than 10 kg bodyweight. For health reasons dipping young lambs is usually inadvisable. There is also the risk of smaller and weaker lambs getting down in the yards or being caught under other sheep in the dip.

Ewe treatment claims

Most short wool backline treatments must be applied within 24 hours after shearing, although some products can be used up to one week after sheep are shorn. Depending on the product chosen, plunge and shower dipping must be conducted between 10 or 14 and 42 days after shearing (see label directions). As long as shearing cuts have healed, the optimum time is from 14–28 days after shearing.

Chemical Resistance

Resistance is known to occur to synthetic pyrethroids and IGR compounds and can compromise the effectiveness of chemical treatment. Unless you are certain of their effectiveness against the lice on your property, avoid using chemicals to which resistance is known.

Product protective periods

Some IGR product labels carry a claim that they will protect sheep from becoming infested with IGR-susceptible lice for 12 weeks after treatment. The neonicotinoid-based product Avenge™ claims to protect treated sheep from reinfestation for a period of 4 weeks. No other products have registered protection period claims. Protective periods may be useful when treated ewes contact untreated lambs, or when treated lambs contact untreated lousy ewes, despite these claims it is unwise to rely on chemical treatments to protect sheep from becoming infested. It is best practice to manage mobs so that treated and untreated sheep do not contact each other. This is best achieved with good fences.

Meat withholding period (WHP), export slaughter interval (ESI) and wool harvesting interval (WHI)

Check that these withholding periods can be met before using a product. The meat WHP and ESI will restrict choice of chemicals when treated sheep or lambs may be sold for slaughter for the domestic or export markets. Consideration of WHP and ESI will be particularly important when choosing treatments for prime lamb flocks. The meat WHP and ESI for recently registered products are shown on the label, but can also be found listed on the National Sheep Vendor Declaration, on the [Australian Pesticides and Veterinary Medicines Authority website](#), the [Meat & Livestock Australia website](#) or by telephoning 1800 023 100. Consideration of the WHI, also shown on the label of most products, will be important when choosing a product for long wool treatment.



Chemical groups and application methods

Table 1 shows the chemical groups and methods of application available to treat sheep lice in breeding ewe flocks. For a listing of products containing chemicals from the different groups, please refer to the LiceBoss Note: [Sheep lice treatments—chemical group characteristics](#) or the [Products Tool](#). Remember, lice will not be eradicated on ewes treated in long wool, so they and their lambs will need to be treated again after their next shearing.

Ewe Lamb Decision Tool

It is hard to capture all of the possible scenarios in a note, so LiceBoss provides the [Ewe-Lamb Treatment Tool](#) that guides you through a series of questions to help you decide the best course of action to suit your particular circumstance. As noted above, with lambing ewes there are many different scenarios that can be envisaged relating to lambing time, shearing time (both ewes and lambs) and weaning time. In some instances it will be possible to shear and treat, in other circumstances a long wool treatment may be required. There are many different short wool and long wool products available and a range of claims relating to time of use, protection time, withholding periods and wool harvesting intervals.

Click this link to use the [Ewe-Lamb Treatment Tool](#) now.

Table 1. Chemical groups and methods of application registered for the treatment of lice in breeding ewe flocks.

Chemical group	Registered methods of application							
	Off-shears/Short wool		Long wool					
	Off-shears backliner	Short wool dip	Backline up to 6 months	Backline up to 10 months	Backline up to 12 months	Hand-jet up to 6 months	Hand-jet up to 10.5 months	Hand-jet up to 12 months
Neonicotinoid	✓	X	X	X	X	X	X	X
Spinosyn	✓	✓	X	✓	✓	✓	✓	✓
Organophosphate	✓	✓	X	X	X	X	X	X
Pyrethroid	✓	X	✓	✓	X	X	X	X
IGR	✓	✓	✓	X	X	✓	X	X
Macrocyclic lactone (ML)	✓	X	X	X	X	✓	✓	X
Magnesium fluorosilicate, sulphur and rotenone	X	✓	X	X	X	X	X	X

Note: Despite products being registered for control of lice on sheep, not all will be effective. This is due to the development of resistance to certain pesticide classes in some lice populations.

Treatments applied in long wool will not eradicate lice. Re-treatment off-shears or in short wool after the next shearing is recommended.

✓ Indicates that there is at least one product from this group registered for this purpose. Check the LiceBoss [Products Tool](#).

X Indicates that there are no products from this group registered for this purpose.

Acknowledgement: This note is based on a previous Department of Agriculture and Food WA Farmnote 447 by Jenny Cotter.

Published: March 2013

Disclaimer: The information provided in this publication is general information only and readers should confirm information from an appropriate and relevant source before making business or commercial decisions based on this information. Sheep CRC Limited and Australian Wool Innovation Limited will not be liable for any loss or damage suffered by a reader arising from the reader's reliance upon the contents of this publication.

Copyright: Australian Wool Innovation Limited. Apart from any fair dealing for the purposes of private study, research, criticism or review, as permitted under copyright legislation, no part may be reproduced or re-used for any commercial purpose whatsoever without the written permission of AWI Web Manager, Australian Wool Innovation Limited, Level 30, HSBC Centre, 580 George St, Sydney NSW 2000, GPO Box 4177, Sydney NSW 2001.