



Control of body lice (*Bovicola ovis*) on shedding and hair breeds of sheep

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This note deals with sheep breeds that shed their fleeces and/or have fleeces that are wholly or partly kemp or hair (Table 1). Some of these sheep have coloured fleeces.

Claims have been made that external parasites do not establish on shedding or hair sheep breeds and anecdotal evidence does suggest that lice are rarely detected on these breeds and their crosses.

The fleeces and skins of some of these breeds are quite different from those of a Merino, so they may be poor hosts for external parasites. However, external parasites will survive on some individuals.

Table 1. Fleece and shedding characteristics of some sheep breeds

Breed	Fleece type and colour	Fleece shed annually?
Afrikaner	Hairy, kemp free; white (in Australia)	Yes
Awassi	Double coated, containing hair, heterotype, wool and kemp fibres; often coloured	No
Damara	Outer kempy coat, inner layer of wool; range of colours	Yes
Dorper	Wool and kemp; black head with white body, or all white (White Dorper)	Yes
Karakul	Double coated; black at birth, greyer with age	No
Namaqua	Hair; coloured	Yes
Van Rooy (White Persian)	Hair; all white	Yes
Wiltipoll	Double coated; white	Yes
Wiltshire Horn	Double coated; white	Yes

Note: The Dohne Merino, the South African Meat Merino (SAMM) and the Afrino are not included as they are wool-growing sheep.



Image: Dorper sheep
Source: Deb Maxwell



The value of treating shedding or hair breeds for lice

The direct cost of lice infestation of sheep may be small if their fleeces have little or no market value, but effective lice treatments will be required for the following reasons:

- If there are wool-producing sheep on the same farm as louse infested, non-wool-producing sheep, then treatment of the latter to protect the former will be essential.
- Any neighbours with wool-producing flocks will have understandable concerns about the risk of spread of lice infestation to their own sheep.
- Damage to potentially valuable sheepskins and to fences and other structures, caused by sheep rubbing, can be difficult to quantify, but may be important.
- Lice can cause an allergic response in skin tissue, resulting in 'cockle' damage to the skin. Cockle is only apparent when skins are processed. It can reduce the value of high-grade skins, such as those that the shedding breeds are expected to produce.

Lice treatment issues with shedding and hair breeds

- When any sheep rub or chew at their fleeces, lice infestation is just one of a number of possible causes. Other parasites may be responsible, such as itch mites or even flystrike. Grass seeds, photosensitisation of the face and ears following some plant poisonings, or sunburn on the back post-shearing may all cause rubbing or the appearance of fleece derangement. Sheep that shed their fleeces annually tend to rub when their fleeces are being shed in spring and summer. Some exotic diseases, such as scrapie, sheep pox, lumpy skin disease and Aujeszký's disease, may cause sheep to rub or chew their fleeces, among other signs. So before assuming that itchy, rubbing sheep of any breed are lousy, inspect them carefully (see LiceBoss Note: [Monitoring sheep for lice](#)) and seek expert help if you are uncertain.
- All chemicals registered for the control of lice on sheep have been developed, tested and registered in the expectation that they will be used on wool-growing sheep that are shorn annually. There has been no research in Australia into the efficacy of chemical treatments of lice on shedding and hair sheep breeds. The recommendations for treatment of shedding and hair sheep breeds are therefore the same as those for wool sheep. Any product registered for lice treatment of sheep may be used, according to label instructions, on these breeds.
- The spread of chemical over the skin from a pour-on or spray-on treatment may occur differently on some of these breeds (compared with wool sheep) due to lower levels of lanolin. Treatment efficacy may not necessarily be reduced though, and it is even possible that treatments may be more successful on these breeds (on average) than on wool sheep.
- The persistence of insecticides may be reduced compared with wool sheep, because some shedding and hair breeds have less lanolin in their fleeces. None of the insecticides used for sheep lice treatment kills louse eggs and so insecticides must remain at effective levels long enough to kill lice that hatch from eggs.
- Itch mites (*Psorobia ovis*, formerly *Psorergates ovis*) live under the skin surface and may cause sheep to chew and rub their fleeces. If uncontrolled, itch mite infestation may cause economic losses, particularly in Merino sheep. The prevalence and importance of itch mites in shedding and hair breeds in Australia is unknown. Unless itch mite infestation is diagnosed, there is no point in treating shedding or hair sheep breeds for itch mite. Macrocylic lactone drenches, used against worms, will also control itch mite.
- The choice of lice treatment to use for wool sheep can be influenced by concerns about chemical residues in wool. If sheep are not shorn and the fleeces not sold or processed, then



there need be little concern about wool withholding periods when choosing chemicals. On the other hand, meat withholding periods and occupational health and safety recommendations will need to be observed. In dairy sheep, the milk withholding period must also be observed.

Lice treatments for use in shedding and hair breeds

Off-shears and short wool lice treatment

Off-shears lice treatment of shedding and hair breeds is the recommended option if they have, or are suspected to have lice. Although the sheep may not require shearing, and their fleeces may have little or no value, treatment off-shears will give the best chance of lice eradication. Shearing itself will markedly reduce lice numbers. Off-shears treatments should be applied according to label directions. That is, backline treatments should be applied within 24 hours or 7 days (depending on the product used), and dips within 6 weeks after shearing, but preferably within 2–3 weeks.

There are numerous products registered for lice treatment of sheep off-shears, and many factors to take into account when deciding which product to use. As well as cost per dose, also consider the possibility of lice resistance to the chemical, operator risk, meat (and possibly fleece and milk) withholding periods, ease of application, stress to sheep and the operator during treatment, and the risk of other problems or diseases associated with particular treatment methods.

Long wool lice treatment (without first shearing them)

Long wool lice treatment of shedding and hair breeds is not recommended. It is better to wait and treat off-shears. If sheep are treated in long wool and not subsequently shorn and re-treated, the best that can be hoped for is that lice numbers will be suppressed to a low, tolerable level. None of the chemicals registered for use on sheep with long wool (more than 6 weeks since shearing) will eradicate lice. If eradication is your ultimate goal, a second treatment will still be needed off-shears. It also carries the risk of selecting lice for chemical resistance, leaving chemical residues in meat or fleece and exposing workers to the hazards of chemical use.

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