

Off-shears backline treatments

Backline treatments, used off-shears, are a relatively simple method of treating sheep to eradicate lice, but it is essential that every sheep is treated correctly.

Advantages

- No need to remuster sheep after shearing.
- Less stress on sheep and reduced risk of leaving any sheep untreated.
- Low labour cost for application.
- Treated sheep are easily recognised by dye markings.
- No dip waste to contaminate the environment.
- Easy to treat small numbers of sheep, including stragglers shorn later.
- Easy to apply correct dose to all sheep.
- Low risk of diseases associated with wet dipping.
- No operator exposure to chemical splash from dips.

Disadvantages

- Must be applied within 24 hours of shearing. (Seven days for some products, but 24 hours is recommended.)
- The product takes time to spread so lice are not killed immediately.
- There is a very poor distribution of chemical around the sheep. Most of the product applied stays on the backline. This reduces effectiveness in areas distant from the site of application.
- The uneven concentration of chemical on the sheep increases the likelihood of resistance to the pesticide.
- May be ineffective on sheep that are not cleanly shorn.

Application

Correct application to every sheep is essential to ensure eradication of lice and to reduce the development of resistance to the product.

Correct dose

Under-dosing is a major cause of failure to eradicate lice and selects rapidly for resistance. Read the label to determine the correct dose.

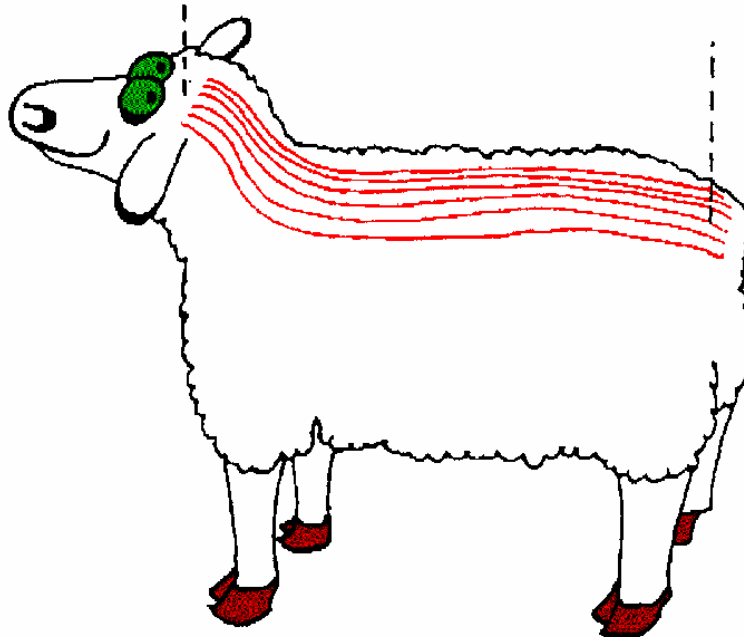
Weigh a few of the largest sheep and set the dose for all sheep to the heaviest weight.

Use the recommended applicator for that product. Some applicators are designed to apply a wide strip of product to promote spread over the whole body.

Check that the applicator is delivering the correct rate by squirting a few doses into a measuring cup.

Method of application

Apply a long strip along the centre-line of the back all the way from poll to tail.



It is sometimes easier to work from the back of the race to the front and apply the product from the tail to the poll. The operator is out of sight of the sheep so they move less than if the application starts from the poll. It is critical that the application is evenly down the centre of the back, so any movement of the sheep that results in a distorted application line may require extra product applied to cover the other side.

Some producers recommend setting the applicator to half the correct dose and applying two strips to each sheep, one from the poll to the middle of the back and the other from the tail to the middle, slightly overlapping the first strip. This ensures that there is no wastage if the applicator is not quite empty on reaching the end of the sheep. Neither is there an untreated tail area if the applicator is emptied too early.

If the application strip is too short or is mainly on one side, then the chemical will not reach all parts of the sheep. With poor application there will be patches of low pesticide levels where lice can survive.

Sheep must be cleanly shorn

Backline products do not work well on sheep that are not closely shorn or that have dermo (lumpy wool). These sheep may need to be dipped or culled.

Treat all sheep

If any sheep are not shorn they must be kept separate from the treated sheep until they can be shorn and treated, or sold. Ensure ration and pet sheep are also shorn and treated.

Do not treat ewes while leaving their lambs at foot untreated. If the ewes had lice then some may have spread to their lambs. The lambs will then transfer the lice back to the ewes as the pesticide concentration declines.

Do not treat ewes less than six weeks before lambing. Backline products take several weeks to spread around the sheep, so there can be live lice present for up to six weeks after treatment. These will infest lambs if they are born within this time.

Treated rams should not be put out with ewes within six weeks after treatment or lice can spread to the ewes.

Rain

Check the label for instructions on whether sheep can be treated if they are wet. Avoid releasing recently treated sheep out into heavy rain.

Resistance

Do not use backline products if resistance is suspected. If lice are resistant to a product then resistance will apply to all other products in the same chemical group. (See below for product groups.)

Most treatment failures are due to failure to treat every sheep correctly, not to resistance. Eliminate other possible causes of failure before assuming resistance.

Avoid using the same product group every year. Most resistance occurs where the same product group has been used repeatedly for a number of years. If treatment is necessary every year then rotate product groups to avoid build-up of resistance.

If resistance is a problem and alternative backliner product groups are not available, dipping may be successful. Dipping achieves a better distribution of chemical over the sheep.

Chemical groups

Synthetic pyrethroids (SP)

These chemicals kill adult and young lice on contact. This group has been available as backline treatments since 1981 so resistance is common in some areas.

The active ingredient is usually cypermethrin, alphacypermethrin or deltamethrin. Examples of this group include Clout-S, Cypercure, Outflank and Spurt.

Insect growth regulators (IGR)

IGRs kill lice when they moult and may prevent the eggs from treated females from hatching. They do not kill adult lice, which may persist for some time after treatment. However, the number of these survivors will be low and they do not indicate resistance.

IGRs break down very slowly so they remain at relatively high concentrations for months after treatment. This may give some protection against reinfestation for a few months. However, protection will not last throughout the year and management to prevent new infestations is still necessary.

Products in this group contain either diflubenzuron (e.g. Magnum, Magik, Zenith, Stampede) or triflumuron (e.g. Zapp, Triffik, Exilice, Cannon).

Organophosphates (OP)

OPs are nerve poisons that affect humans as well as lice, so care is needed. They have been used as dips for many years, but use of OPs for dipping is being phased out due to health concerns about workers exposed to splash and spray from dip wash. They can also be applied as backline treatments. As there is normally no splash with backliners this use of OPs is expected to continue.

Care is needed during handling and application, and protective clothing must be worn because the concentration of chemical in OP backliners is much higher than in dip wash.

Most of the other backline treatments are applied without further mixing, but the OP backline requires dilution in water before application. Take extra care to avoid splash while mixing.

The volume applied to each sheep is much greater than for the other backline methods so the correct applicator must be used. The high volume (over 100 ml) may give better spread over the whole sheep. Some applicators use a timer rather than a direct volume measurement and it is essential to check that the correct volume is being delivered before commencing work.

Lice resistant to OPs have been reported but resistance is low-level and rare.

The active ingredient in OP backliners is diazinon and the only registered product is Eureka Gold.

Spinosyns

Extinosad is available as a dip and the same chemical is, or soon will be, available for application by backline treatment. Lice are killed on contact with the pesticide.

This pesticide group has only been available for a few years and resistance has not been reported.

The active ingredient is spinosad.

Safety

All chemicals applied as backline treatments are at high concentrations (compared with dip mix) so care must be taken in handling them and avoiding contact with the chemical. In some cases the solvent rather than the active ingredient can cause allergic reactions, skin irritation or headaches.

Follow safety directions on the container.

Wear protective clothing recommended on the label. This usually includes waterproof gloves.

If the chemical is swallowed or contacts the eyes then call the Poisons Information Centre.

*Mention of trade names does not imply endorsement of any product and they are given only as examples.
See LiceBoss Product lists for a complete list of available products.*

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Level 5, 16-20 Barrack Street, Sydney, NSW 2000 Australia.