

IN THIS ISSUE

- DON'T LET LUMPY WOOL PUT A BUMP IN YOUR FLEECE
- DRENCH ROTATION IT'S NOT THE ANSWER
- ARE MOZZIES DRIVING YOUR MUT MAD?
- FACEBOOK: MONTHLY RECAP

DON'T LET LUMPY WOOL PUT A BUMP IN YOUR FLEECE

Lumpy wool, otherwise known as 'dermo' or mycotic dermatitis, is a skin condition caused by bacteria. Sheep generally carry this bacteria in an inactive form when the fleece and skin are dry, however, once moisture is present, the bacteria are released from scabs and become active.

Due to the ongoing wet weather, sheep have remained wet at skin level for extended periods, bringing with it a rise in the incidence of dermo. Treating dermo is very important, as it can cause significant issues with flystrike and a reduction in fleece quality and quantity.

Infection by the active bacteria causes inflammation of the skin, which then releases an exudate that forms scabs and the characteristic lumps in the wool. Wool will often matt, making the sheep very susceptible to flystrike when the wool becomes wet. Dermo is very contagious and can transferred from sheep to sheep.

There are some strategies that can be utilised to reduce the risk of spread of the disease:

- 1. Avoid prolonged yarding and/or situations where close contact occurs of wet sheep
- 2. If dipping, allow sheep to disperse immediately when they leave the dip
- 3. Using zinc sulphate in dip fluid at a rate of 4-5kg/1000L (0.5% in solution) can help cure established dermatitis infections. This rate can be increased to 1% if required for higher levels of infection. Ensure that zinc sulphate is compatible with other additives to the dipping fluid
- 4. Remove infected sheep from the mob to reduce incidence of blowfly strike. Fly control options should be considered

Severely infected sheep can be treated with antibiotics to lift scabs, however this is only recommended for sheep that would die if left untreated, or if close to shearing. Your local veterinarian should be contacted for antibiotic treatment.

Don't let dermo reduce your production! Come and talk to our Animal Production Specialists about the best solution for you.





DRENCH ROTATION - IT'S NOT THE ANSWER

Rotation between different drench groups does not slow development of drench resistance and should not be used at the expense of these three highly effective practices:

- Use products most effective on your property
- Use multi-active (combination) products
- Use short-acting products

Drench rotation is the practice where consecutive drenches are used from different drench groups. A simple example of a drench rotation is for the first drench to be from the BZ group and the next time a drench is given, a product from the levamisole group is used. Advances in the understanding of drench resistance indicate that the practice of rotation itself will not delay the development of drench resistance.

To provide context to the scenarios below, a treatment with resistance at 10–20% (in other words, the drench is 80–90% effective) will result in a large loss of production from worm infection.

Development of drench resistance

The first scenario is sequential drench use (no drench rotation), where drench A was the only drench group used for 15 years before being replaced by drench B as the only group for the next 15 years. In the second scenario (annual drench rotation), drench A was used in an annual rotation with drench B for 30 years. For example drench group A in year one, group B in year two, group A in year three and so on.

Complete resistance is predicted to have developed to both drench groups A and B after 30 years regardless of whether a rotation was practiced or not; but let's look more closely at these scenarios. When the drenches are used alone (sequential), resistance to drench A increased after 10 years to about 80% (shown as the blue circle on the Figure 1), but when rotated with drench group B, resistance had only increased to about 30% (grey circle on Figure 2).

The main reason for this apparent benefit at this stage is that only half the number of doses of drench group A were given when used in a rotation and so there was less opportunity for sheep worms to develop resistance.

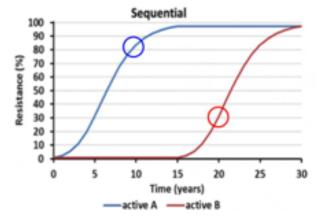


Figure 1: 'Sequential'—Development of drench resistance when drenches are used sequentially.

At the 10 year-mark of the simulation a drench rotation looks highly effective at slowing the development of resistance, but remember, in the sequential use situation, while resistance to drench A is 80%, drench B is still 100% effective because it has not been used.

Now let's look at the predicted situation after 20 years. By then, drench group B had only been used alone (sequential) for 5 years and resistance had developed to about 30%, see the red circle on Figure 1, (and resistance to Drench A is 100%). When used in rotation, resistance to both drench groups had increased to about 80% (black circle on Figure 2). A complete reversal of the situation that was predicted at the 10-year mark.

On average, across the entire 30-year period, there was no predicted advantage from a drench rotation.



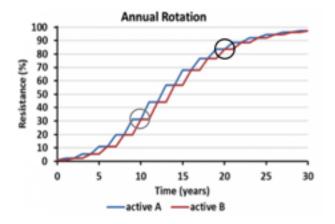


Figure 2: 'Annual Rotation'—Development of drench resistance when drenches are used in rotation.

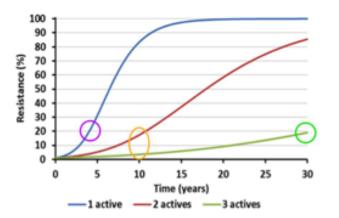


Figure 3: 'Combinations'—Development of drench resistance when one, two or three drench groups in a treatment.

Use drench groups in combination

In contrast, using drench groups in combination has a much greater effect in slowing the development of drench resistance. Using two drench groups in combination at each treatment reduced resistance after 10 years to 20% and when using three drench groups in combination, resistance had only developed to the level of 5% over the same period (see orange oval in Figure 3).

In a situation where you had three drench groups at your disposal and you decided to use only one until resistance to that drench group developed to 20% (purple circle on figure 3) (when major production loss would be occurring due to the drench being only 80% effective), then each of the three drench groups could be used for about 4 years each, giving 12 years before major production loss was likely to occur from poorly controlled worm infection.

In contrast, if you used all three drench groups in combination (green line on Figure 3), it is predicted that major production loss from drench resistant worm infections would not occur until after 30 years (green circle, Figure 3). This is an 18 year advantage over the singular use of drench groups.

Conclusion

Rotation between different drench groups does not play a significant role in slowing the development of drench resistance. The three principles for choosing drenches to slow the development of drench resistance are:

- Use drenches most effective on your property
- Use an effective combination of two or more drench groups, either in a multi-active product or using more than one product concurrently to combine different drench groups.
- Use short-acting treatments and restrict the use of persistent products for specific purposes and high worm-risk times of year.

Article adapted from Wormboss website by Lewis Kahn, ParaBoss Executive officer.







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We wish you a Merry Christmas and a Happy New Year!



Contact an AgriWest specialist today for more information.

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