



## Dressing flystrike wounds

### Flystrike dressings

Ideally, a flystrike dressing should kill all maggots to prevent further tissue damage to the sheep and prevent resistance and reduce future blowfly populations and, prevent re-strike on the dressed area for sufficient time to allow the wound to heal.

Most registered flystrike dressing labels stipulate that the struck wool and a 5 cm barrier around the strike should be shorn close to the skin before the dressing is applied. Unfortunately, many wool producers are not willing to clip off struck wool, preferring instead to rely on insecticide dressings alone to control strikes. Whether wool is removed or not affects the choice of preferred treatment as outlined below.

Clipping strikes removes many larvae, opens the struck area so that all maggot trails are found, helps dry the area, and ensures that less wool is treated with insecticides. Wool clippings should be placed into a sealable bag to kill maggots but otherwise left untreated. In a NSW Department of Primary Industries trial in which strikes were shorn with a mechanical shearing handpiece but otherwise left untreated, only four strikes out of 52 (8 %) still contained larvae one day later. In a separate trial six out of 17 (35 %) remained unresolved if hand blades had been used. These results suggest that shearing strikes is sufficient to remove maggots in the vast majority of cases if wool is removed close to the skin. This is very fortunate given the results of laboratory trials with some registered flystrike dressings. Products were tested against susceptible and organophosphate resistant third instar larvae - the size maggots have grown to when farmers recognise that sheep are struck. Only a few of the products were capable of causing greater than 50 % mortality of organophosphate resistant maggots. Many dressing products contain an organophosphate insecticide, so reduced effectiveness against resistant strains was not unexpected. However, there are some non-organophosphate products that are very effective in killing maggots.

As shearing can clear up most active strikes, the main purpose of an insecticidal dressing becomes protection of the healing wound from re-strike - either by *Lucilia cuprina* or the even more damaging green hairy maggot blowfly, *Chrysomya rufifacies*. This may be achieved by repelling egg-laying female flies, or by killing newly hatched first instar larvae that emerge from eggs laid onto treated lesions. The

various registered products aim to do one, or both of these things. Experimental data has demonstrated that the insecticide residue left after the application of any of these products, including cyromazine, is sufficient to kill either blowfly eggs or the larvae that hatch from eggs laid onto the flystrike lesions.

Unfortunately, shearing strikes increases the workload and leaves holes in the fleece. For these reasons producers are often reluctant to shear strikes and invariably miss some maggot trails and pour a lot more insecticide into the fleece. Most shearers, however, will prefer holes in the fleece than a matted mass of wool. Without removal of wool, treating flystrike is no different from jetting struck animals. If wool producers do not clip off struck wool it is essential to kill maggots to minimise the distress suffered by the sheep and the choice of flystrike dressing is important. Slow-acting cyromazine jetting fluids are not the best choice. Instead a faster-acting product with demonstrated ability to kill maggots is required. Ivermectin based products have been shown to have excellent effectiveness against third instar maggots. Some organophosphate based dressings are still effective - probably because of components of the formulation other than the OP insecticide. The registered spinosad jetting fluid has inadequate effectiveness against third instar maggots to be recommended for this purpose.

Current recommendations:

Based on the research results outlined above and mindful of the need to minimise pesticide residue in wool, prevent unnecessary stress to struck sheep, and provide acceptable re-strike protection. The current recommendation is to:

- shear strikes close to the skin, preferably with a mechanical shearing handpiece
- collect the clippings into a maggot-proof bag
- wear appropriate personal protective equipment
- apply a registered fly dressing to the shorn area, preferably using a low-pressure applicator, to prevent re-strike. Note that the Australian Pesticides and Veterinary Medicines Authority has set a one month withholding period for sheep following individual application of wound dressings or flystrike treatment.
- draft-off flystrike treated sheep and run them separately from the main mob to reduce the attractiveness of the mob to blowflies

Alternatively, strikes should be shorn and the sheep jetted together with other flystrike susceptible sheep using a product capable of providing long term flystrike protection.