



DOHNE

Solutions

Flystrike

Flystrike is a significant health and welfare risk to Australian Sheep, and costs the industry \$280 million annually. Flystrike influences the profitability of the enterprise, not only from loss of productivity from the individually struck animals, but also through the increased amount of time and cost of treating and preventing flystrike.

Reducing the risk of flystrike has immense benefits to the health and wellbeing of sheep, the people who work with them and the farm productivity.

Risk of flystrike depends on environmental conditions as well as how susceptible sheep may be.

The main species of blowfly that initiates about 90% of all strikes is the Australian sheep blowfly (*Lucilia cuprina*). The damaged tissue and body fluid that oozes from the flystrike wound caused by *L. cuprina* attracts other species of flies. The hairy maggot fly *Chrysomya rufifacies* is the most important secondary fly. It does not initiate flystrike, but readily invades flystrike wounds started by *L. cuprina*.

Environmental conditions that are perfect for flystrike include

- The presence of primary species of fly *L. cuprina*
- Temperatures between 15-38 degrees
- Recent rain – enough to keep suitable sites on the sheep moist for about 3 days.
- There must be suitable sites (wrinkles, urine, faeces) on the sheep to attract flies and sustain larvae.
- Wind speeds below 9km/hour, as this gives flies the best opportunity to disperse.

Susceptibility of sheep depends on environmental conditions as well as sheep type and management strategies.

Whilst flystrike is exacerbated by warm, wet or humid seasonal conditions, there is scope for genetics and breeding to reduce susceptibility of animals to flystrike through...

Best case scenarios - plain bodies sheep with low incidence of fleece rot and body strike, hoggets having good worm control and rarely scouring in spring, lambs with low level of breech wrinkle, flocks having shorter (less than 4 months) wool during fly risk times in spring and autumn, and paddock monitoring (every 2 days) during high risk times.

Worst case scenario – highly wrinkled Merino sheep, hoggets that are daggy and with poor worm control, flocks with long wool and uncrutched/unshorn over high risk times.

Many options will help reduce the risk of flystrike. Genetic options are long term and permanent, making them a valuable tool in lowering risk. For short term, a range of husbandry options is available.

Preventing flystrike is more economical than treating it.

Short-term management tools such as strategic chemical application, crutching, shearing, and controlling worms and dags.

Producers seeking longer-term solutions should investigate genetic option such as breeding for reduced dags and wrinkle.

Breeding for resistance to breech strike offers the best long-term permanent solution. Selecting the best animals for your breeding flock requires selection of both superior rams and ewes using traits that are easily and accurately measured and heritable. Traits that have been shown to be related to breech strike in winter rainfall environments are

- Scouring and dags
- Breech wrinkle
- Breech cover (or bare area)

These traits are important as individual traits themselves, but increasingly valuable when 2 or more are present on the same animal.

It is possible to select and breed your flock for increased flystrike resistance by focussing on the traits that increase the risk of breech strike (wrinkle and dag) and body strike (fleece rot).

Any gains made in breeding are permanent and cumulative and will reduce treatment and management costs associated with flystrike in the future.

For a commercial breeder, components to rapidly breeding a flock with low flystrike susceptibility include

1. Select rams with low wrinkle (and low dag) ASBVs. Be sure to select rams that also have favourable fleece rot resistance and performance in production traits (eg fleece weight and fibre diameter) that are consistent with your breeding objective.
2. Assess ewes for fleece rot, wrinkle, dag and breech cover – use visual scores guide.

Heavy rainfall and floods during warm summer months can increase risk of flystrike. Continual wetting of fleeces without drying, leads to skin damage and the release of

extra protein, which in turn encourages bacterial overgrowth. This makes the wet fleece even more attractive to flies.

Fleece rot, Dermatophilosis and other forms of bacterial stain are very common during a wet summer and after flood. All types of sheep are susceptible to being struck during wet seasons.

At Glen Holme, we take the opportunity to use high-pressure conditions to highlight the genetic variation within our flock. All animals have been subjected to the same environmental conditions in the paddock and some, but not all animals are affected by flystrike. Animals with increased susceptibility be it through breech cover, or wool quality issues, are culled. Over many years we have seen a shift in reduced incidence of severe wrinkle, and improvements in breech cover (fewer animals with score 4&5 breech cover). This shift has come through awareness of the detrimental effects of the trait, observation and recording of scores, and culling animals who express these undesirable traits.



The image to the left is a photo taken at marking time, showing clearly the extended bare area around the perineum and breech area. We use the Visual Sheep Scores manual put together by AWI and MLA for scoring and recording various traits at Glen Holme.

Yes, there are treatment options, and yes, there are chemicals to assist in prevention of flystrike. However, increased genetic resistance within your flock is a valuable tool, which does not need to come at a great cost. Maximising the number of animals in the flock which need minimal or no treatment is a saving in both labour and cost of the treatments.

References:

Smith, J and Curnow, M. Managing Flystrike in Sheep, Department of Agriculture and Food. www.agric.wa.gov.au/livestock-parasites/managing-flystrike-sheep

Breeding to Reduce Flystrike Susceptibility, www.flyboss.org.au/breeding-and-selection/breeding-to-reduce-flystrike-susceptibility.php

Flystrike; Management after a wet summer and floods, 2016, <http://agriculture.vic.gov.au/agriculture/livestock/sheep/sheep-health-and-welfare/flystrike>