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Breeding for breech flystrike reduction

Blowfly strike costs the sheep industry over $280 million each year in lost production and treatment methods.

The majority of fly strike occurs in the breech due to skin wrinkle and soiled wool.

The most effective control method for the last 50 years has been surgical mulesing.

AWI is searching for non-surgical alternatives so that the practice can be phased out by 2010 (clips, injectable compounds, genetic selection, husbandry practices).

Naturally bare breech Merinos could be the key to a permanently robust and manageable form of breech fly strike reduction within one's flock.

Breeding for reduction in fly strike

A number of animals have been identified with naturally bare breech and/or crutch that do not require mulesing or crutching.

A research project in a flock possessing bare breech animals has shown that the bareness traits:

- vary between animals from very bare animals to animals with a woolly breech and crutch;
- are moderately heritable;
- did not have strong unfavourable correlations with other wool quality traits; indicating that selection for finer, barer sheep is readily achievable; and
- can be transmitted to other flocks by using bare breech rams.

Subsequent searches have found animals in a number of flocks which have bare breech characteristics.

This is an important step in the search for a low-cost and permanent alternative to crutching and reduction in fly strike in the long term.

Photo source: University of Adelaide, Calcookara stud, Cowell, SA

On-going research is looking at:

- whether bareness traits are expressed the same in all background genetics and different environments;
- how many genes affect the trait and how they are inherited; and
- what further correlations exist with other production and quality traits that impact on Merino profitability.

Next steps

- Further develop tools so that producers can select animals that are barer and possess less wrinkle and dag.
- The new Visual Breech Scores guide is a breech scoring system to help the sheep and wool industry investigate the long-term effects of breeding and selection of Merino sheep with breech characteristics known to reduce susceptibility to breech flystrike.
- The guide is the first of its kind in Australia, and is based on the three 'indicator' traits – breech wrinkle, bare breech area and dag score.
- AWI urges all producers to begin looking for bare breech animals in their flocks, using the standard scoring system.
- AWI encourages all ram breeders to look at scoring both breech wrinkle and bare area traits to develop the capacity to deliver breeding values for these traits as standard ASBVs for Sheep Genetics Australia (SGA).
- The system is being used in AWI-funded research flocks to determine the heritability of these traits, and measure their impact, if any, on important production traits such as fleece weight, fibre diameter and body weight.

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- The Visual Breech Scores guide has been developed for each trait and various age groups so they can be used at the same time as normal management tasks such as lamb marking, classing, crutching and shearing.
- Copies of the Visual Breech Scores guide can be ordered via the AWI Helpline 1800 070 099 or by visiting www.wool.com.au

Breeding for mules free sheep is a long term solution but the effects are permanent, cumulative, natural and relatively low cost.

For more information

Call AWI tollfree on 1800 070 099, visit www.wool.com.au or get in touch with:

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ISBN: 1 92090 8358 3/11/2005 NAG23136

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