

The Effect of Clip Mulesing on Breech Wrinkle, Breech Cover and Dag Score of Merino and Crossbred Lambs

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Flystrike prevention is a vital part of sheep husbandry in Australia. Mulesing is a highly effective method of flystrike prevention but has received significant negative press and opposition from some community and consumer groups. Plastic 'anti-flystrike' clips that can be applied to the breech area (Leader™ *) have been developed as an alternative to surgical mulesing.

This study examined the effect of the clip treatment on breech wool cover, breech wrinkling, dag score, shearing injury at crutching and live weight 7 months after clip application. The study also tested how these effects differ with individual characteristics of the lamb prior to application. The clip treatment is compared to unmulesed lambs. It was hypothesised that the clips would reduce breech cover, wrinkle and dag score.

This trial involved 1,040 mixed sex superfine Merino and 444 Merino x Border Leicester ewe lambs born in spring 2008 at Department of Primary Industries, Hamilton. The treatment was applied at marking when the lambs were 8-10 weeks of age. At marking, in addition to normal farm practice, each lamb had electronic identification applied and marking weight, sex, breech cover, breech wrinkle, and dag scores recorded. Scoring was carried out by a trained technician using the Visual Sheep Scores (Australian Wool Innovation 2007). Lambs were randomly allocated within type (i.e. Merino x Merino or Merino x Border Leicester) and sex to either 'clip mulesed' or 'non-mulesed' treatment. All lambs were treated at marking with Clik® as a preventative chemical treatment. Lambs were scored again at 7 months post treatment. Parsimonious ordinal logistic regression models were developed relating scores at 7 months to scores at marking and to lamb characteristics.

Application of clips reduced breech cover scores, but the effect was larger in crossbreds than Merinos ($P < 0.01$) and was also greater on lambs with a lower score at marking (Table 1). The interpretation of the relative odds presented in Table 1 is that, when the relative odds are greater than 1, clip mulesing reduced the rating scores for individual sheep relative to the scores of un-mulesed sheep. When the relative odds are equal to 1, clip mulesing had no effect.

The clip treatment reduced the 7 month wrinkle score ($P < 0.001$), but the effect on the predicted probabilities were relatively small (Table 1). There was no effect of the clip treatment on liveweight at 7 months post treatment (22.5kg vs. 22.4 kg, $P > 0.05$), injury score at crutching, or 7 month dag score (Table 1).

Table 1. Relative odds of keeping rating scores at 7 months post treatment below a given level with clip mulesing

Type of score	Situation	Relative Odds	95% Confidence Limits
Breech	Merino	Breech Score at marking=1	7.8 (2.4, 25.2)
		Breech Score at marking=3	3.4 (1.9, 6.1)
		Breech Score at marking=5	1.5 (0.8, 3.0)
	Crossbred	Breech Score at marking=1	29.1 (9.9, 84.9)
		Breech Score at marking=3	12.9 (7.0, 23.8)
		Breech Score at marking=5	5.7 (2.3, 13.9)
Wrinkle	all	2.0 (1.4, 2.8)	
Injury	all	1.0 (0.7, 1.4)	
Dag	all	1.19 (0.8, 1.8)	

Clip treatment had the greatest effect on the bare breech area of the lambs. Clips were most effective in reducing the breech cover of lambs with a score of 1 to 3 and in crossbred sheep. Further development of the clips is required to improve effectiveness on wrinkly lambs that are at greatest risk of flystrike.

Australian Wool Innovation and Meat and Livestock Australia (2007) Visual Sheep Scores – Research Version.

* Leader: http://www.leaderproducts.com.au/04_Products/08_Other_tags/items/08_AntiflystrikeClip/AFClips.html

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