

Efficacy of a reduced mulesing wound size on breech strike risk parameters and wound healing in Merino weaners

E Sears^{a*} and S Lomax^a

*Corresponding author.

^a Faculty of Veterinary Science, The University of Sydney, Camperdown, NSW 2006, Australia

* esea4872@uni.sydney.edu.au

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1 **Abstract**

2 **Objective** To compare the effect of a conservative mulesing wound size and the
3 modified 'V' standard mules on breech strike parameters and wound healing in Merino ewe
4 weaners.

5 **Design** Two separate trials were performed on Merino ewe weaners (6-8months) in
6 the Southern Tablelands of NSW. Animals were randomly assigned to one of two treatment
7 groups; modified 'V' standard mules (NMAP) (n=100) and the conservative (CONS) (n=100).

8 **Methods** In both trials, sheep were weighed and scored for key breech strike risk
9 parameters (breech wrinkle and breech cover) prior to and following mulesing treatment.
10 Wounds were photographed at Day 0 and Day 28 relative to mulesing and analysed using
11 digital planimetric software to obtain measurements of wound surface area (WSA, cm²) and
12 contraction rates as an indication of healing.

13 **Results** In both trials the CONS treatment resulted in a smaller WSA at Day 0 and Day
14 28 relative to mulesing (P < 0.001). The CONS treatment removed significantly less tissue (P
15 = 0.018). Both treatments resulted in a reduction of breech wrinkle and breech cover scores
16 (P < 0.001). The NMAP treatment resulted in lower breech scores following treatment (P <
17 0.001).

18 **Conclusion** The CONS treatment is beneficial for animal welfare outcomes as WSA is
19 reduced. Both treatments generate an adequate reduction in breech wrinkle and breech
20 cover in order to reduce the risk of breech strike, however the greater reduction in breech
21 parameters from the NMAP treatment suggests that a selective approach to mulesing is
22 required.

23 **Keywords:** mulesing, breech strike, breech cover, breech wrinkle, wound surface area