



Non Mulesing Network

Newsletter of the Department of Agriculture and Food

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WELCOME

Welcome to the eighth edition of the Department of Agriculture and Food's newsletter on the transition from mulesing and managing breech strike.

Please pass this newsletter on to anyone who is interested and encourage them to register for future editions by emailing Julia Smith (Department of Agriculture and Food, Albany)

julia.smith@agric.wa.gov.au

Have you recently stopped mulesing or are you thinking about it?

If you would like to share your experiences with other sheep producers who are in the same position and learn from other experiences, please email Julia Smith julia.smith@agric.wa.gov.au or phone 08 9892 8450.

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In brief!

flyboss
org.au

FlyBoss has recently been released and contains research results and new tools that can help you can better manage the risk of flystrike in your flock. Click on www.flyboss.org.au to find out more!

To read more about FlyBoss and to find out more about how the tool can help you estimate the risk of flystrike in your flock go to page 3.

For further information contact:

www.agric.wa.gov.au/mulesing

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Important disclaimer

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Intradermals – where are we up to?

Cobbett Technologies in conjunction with AWI are conducting trials to develop a chemical application, "Skin Traction®", which aims at increasing breech and tail bare area and reducing breech and tail wrinkles. The solution consists of 7% of Sodium Lauryl Sulphate (SLS) which is a common ingredient in shampoo, cleaning products and some cosmetics. The formula also contains benzyl alcohol which acts as a short-term (15mins) anaesthetic and preservative.

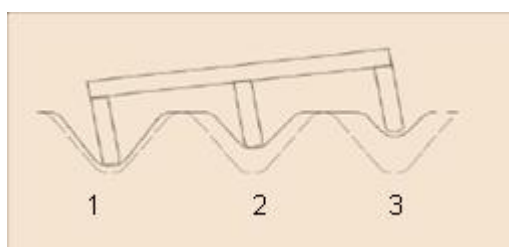
The SLS denatures the protein in the skin and causes irreversible damage to blood vessels & cell structure. Any unused SLS left in the system is metabolised by the liver and 95% of the solution is excreted from the lamb as urine within 24hrs after treatment. The solution is delivered intradermally to the breech and tail skin using a needle free applicator (figures below) which is powered by an air compressor. The solution is contained in the target area and a dry scab forms over the next week or so which lifts off as the sides of the untreated skin closes in and stretches the skin in the breech area. This enables the wrinkles to be removed and increases the natural bare area.



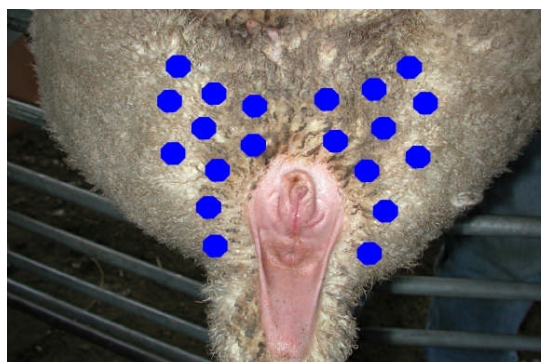
The applicator is currently being trialled on lambs ranging from 2 wks old to weaners. Variables

currently being studied in trials include lamb size, wool length, dag score, volume and pressure of the solution per shot and patterns of applications.

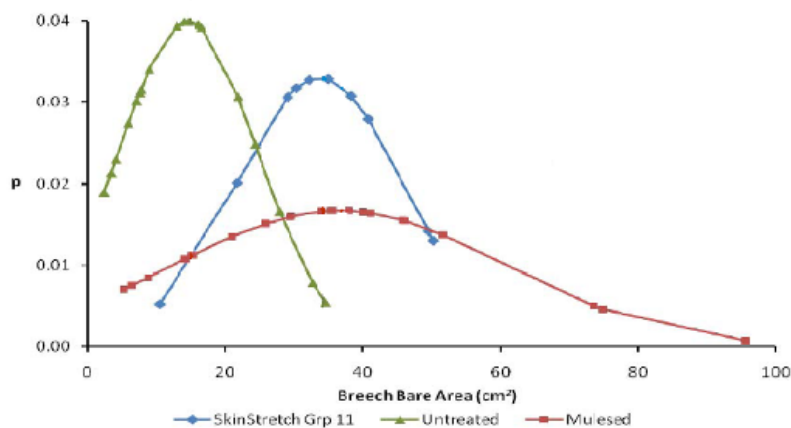
The application technique is becoming a key variable in the effectiveness of the solution. For optimum results there must be uniform pressure on each skin point. The diagram below represents some of the challenges in getting this pressure correct. The applicator needs to be pressed with sufficient pressure to ensure consistent contact with the skin. If the applicator is not pressed evenly onto the skin (Point 3) there will be solution run off and in effective pressure at all points.



There are numerous patterns of application currently being trialled. A promising pattern is outlined in the photo below and has applications at 21 sites. Each blue dot represents an application of the gun. Quickly after application, the pain sensing cells are destroyed along with blood vessels.



Results to date indicate that lambs exhibit similar behavioural responses to untreated lambs; however temperature and blood markers may stay at higher than normal levels for several days after treatment, indicating a healing process. Welfare groups such as the RSCPA have visited trial sites and have provided favourable responses. The below graph demonstrates that in one group, the breech bare area of the SkinTraction treatment group was significantly increased, with the average bare breech area of



the SkinTraction group being similar to the bare area of the mulesed group.

Currently, there are nine field trials are continuing with encouraging results to date. These trials are aimed at refining the pattern and techniques of applicator as well as reducing operate variability. It is hoped that after further testing and APVMA registration that this product will be able to be sold directly to wool growers. For more information please visit www.cobbett.com.au

Clips – where are we up to?

Breech clips are a plastic clips, developed by AWI, that are applied to the breech of lambs at marking time. Clips became commercially available in 2009 and are currently available from Leader products (www.leaderproducts.com.au).

Four clips (two tail clips and two breech clips – see images below) are required per lamb and each clip can be re-used several times. Clips should only be applied by trained contractors. Trained contractors in your area can be found by [clicking here](#). Once applied, lambs where possible can be kept close to the yard so the clips can be removed 7 days after application and reused. Clips are not considered suitable for sheep with breech scores of 4 or greater.



Lambs that have clips applied to them show a reduction in pain and higher growth rates from marking to weaning when compared to mulesed lambs. Growth rates of lambs when using clips is similar to growth rates of non mulesed lambs.

Studies by AWI have demonstrated that clips can provide a reduction in breech wrinkle score and decrease urine stain and dags when compared to non mulesed lambs, which are predisposing factors for flystrike

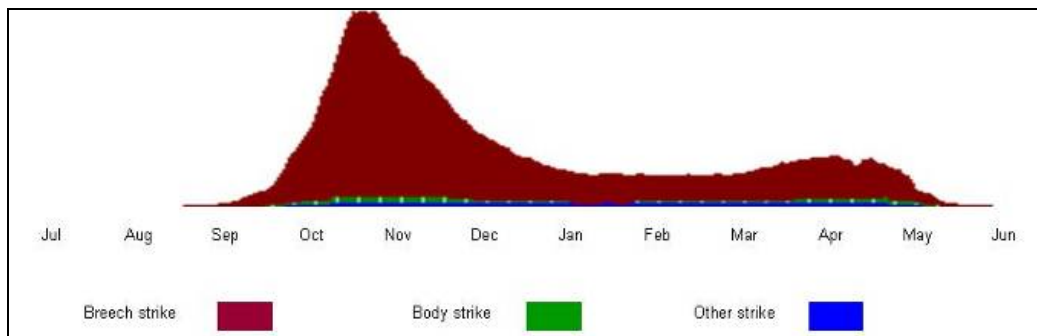
Clips also increase bare area of the breech and tail, when compared to non mulesed sheep. A recent study by Woodhouse *et al* (2010)* found that clips were most effective in reducing breech cover in crossbred lambs. When compared to the lambs in the non mulesed treatment group, this study found favourable results in that there was no difference in live weight (measured at 7 months post treatment) or injury score at crutching. However, there was also no difference between dag scores of the clipped and non mulesed treatment groups.

*Woodhouse, R.J., Jongman, E.C., Byron, J., Thomson, K., Butler, K.L. and Behrendt, R. (2010) 'The Effect of Clip Mulesing on Breech Wrinkle, Breech Cover and Dag Score of Merino and Crossbred Lambs', in *Proceedings of the 28th Biennial Conference of the Australian Society of Animal Production*, Australian Society of Animal Production, Armidale, pp. 121.

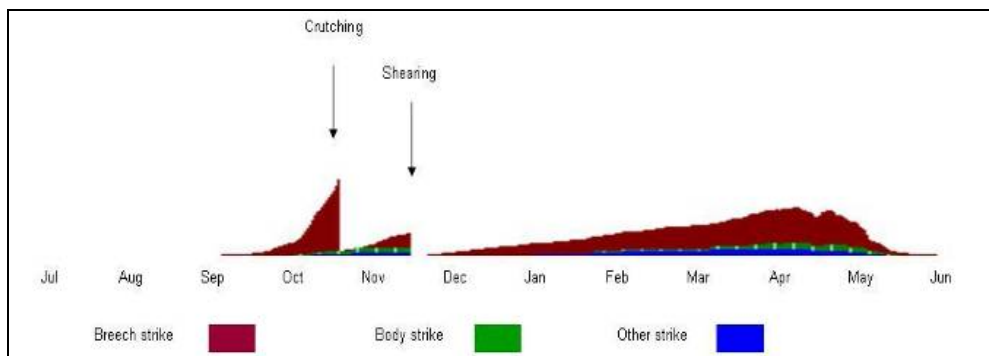
The timing of shearing and crutching can help you reduce flystrike

The recently released FlyBoss website has numerous tools which aim at helping producers understand, minimise and manage their risk of flystrike. One of these key tools allows producers to change time of shearing and crutching, and choose alternative chemicals. This tool then uses the entered information and provides producers with a relative risk of flystrike (both body and breech) in the flock.

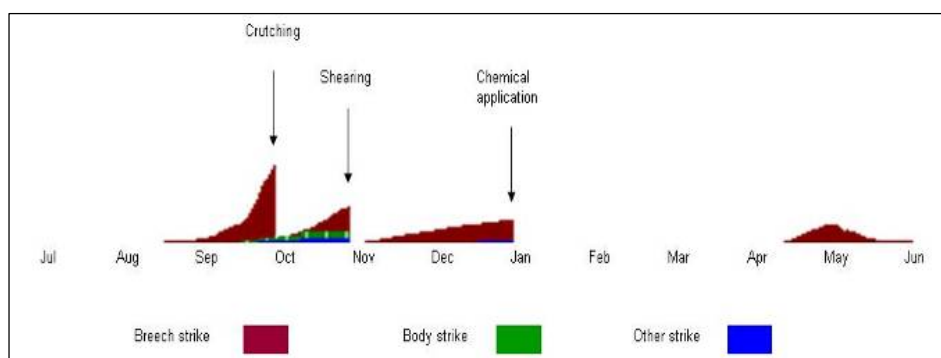
The below graph is from the Flystrike Risk Tool and shows the relative risk of flystrike in non mulesed Merinos for the Katanning area. The height of the graph indicates the average flystrike risk relative to the highest risk period. The actual risk will vary greatly from week to week due to seasonal conditions.



The spring and summer months have increased fly pressure due to increased rain fall and warmer temperatures making weather conditions favorable for strike. Risk over these months can be decreased by the timing of shearing and crutching in the program. By entering in this data, the program will show the changes in risk. For example, crutching date in mid-October and a shearing in mid-November will reduce your risk of flystrike, as shown by the relative risk graph below. Shearing and crutching can give up to six weeks protection from breech strike. If sheep are scouring, this protection can be reduced to three weeks.



If further protection was wanted over the autumn months, applying a chemical treatment may be useful. The below graph demonstrates the reduced risk of flystrike after application of the chemical that gives three months protection. For more information and to use the tool yourself, please [click here](#).



Improving the breech strike resistance of your flock

The joint DAFWA and AWI Breeding for Breech Strike Resistance project based at Mt Barker Research Station has found that dags in the winter rainfall environment dags are by far the most significant component (11%) in determining breech flystrike, as shown by the graph below for the hoggets. The actual percentage will vary slightly depending on if the data is based on weaning age, a combination of weaning and hogget age, high or low challenge years. Also if the indicator traits are examined further, for an example if wrinkles are separated further, tail wrinkles scored pre weaner shearing gave up to 6% of the variance. The combined indicator traits account for approximately 25% of the differences between the susceptible and resistant animals.

In winter rainfall environment dag score the most important of the indicator traits. Breech wrinkle score is the most important factor in determining breech strike in the summer rainfall areas, with an increased prevalence of strike in animals with breech wrinkle scores of 4 or 5.

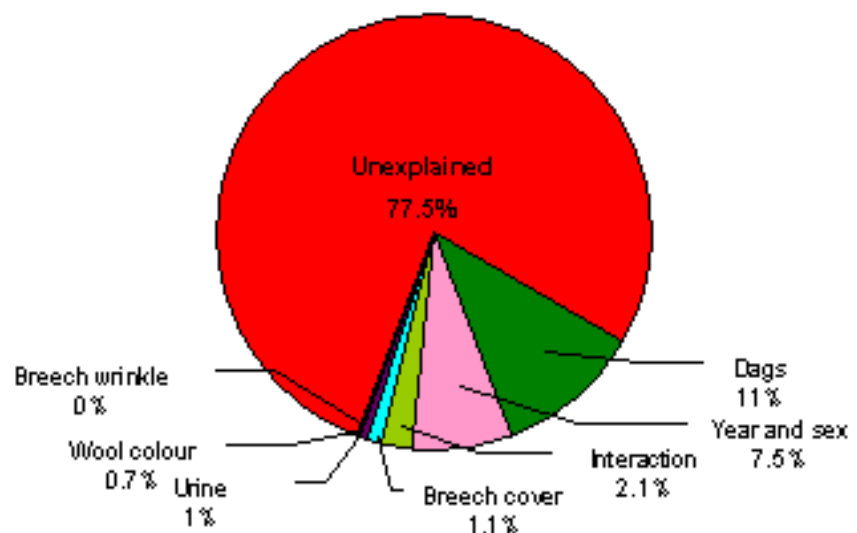
Breeding for breech strike resistance means the gains that are made are permanent and cumulative. Breeding is a cost effective way to reduce the risk of flystrike and does not have to reduce the performance of the production traits when a balanced selection is made.

By selecting the right animals, you can make gains in breech strike and clean fleece weight. The graph below from Sheep Genetics Australia shows that there are always individuals within a mob with low breech wrinkle scores and higher than average fleece weights. Animals in the top left quadrant have plain bodies as well as higher than average greasy fleece weight. This is also the case for low fibre diameter or high body weight selections.

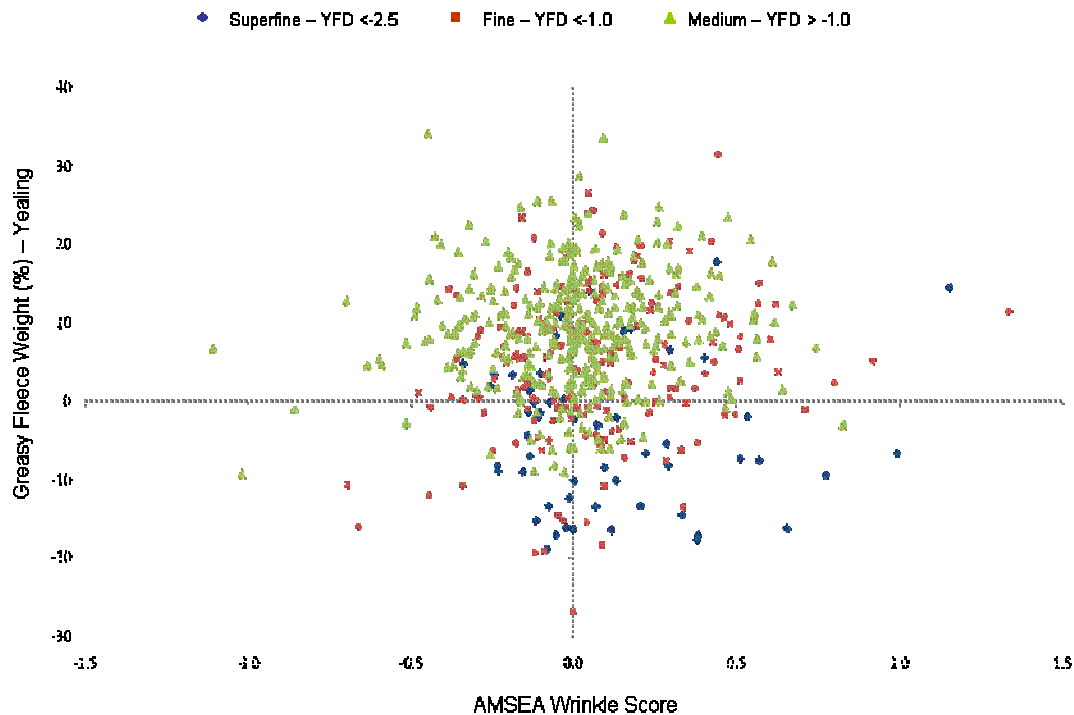
Selecting for breech strike resistance and breeding for plainer bodied sheep can also have many other positive impacts on your sheep flock. Selecting for plainer bodies can also increase in the number of lambs weaned/ewe mated. Recent results from this project found that the selected plain bodied line averaged 0.91, whilst the select the non selected line averaged 0.58 lambs weaned/ewe mated for the three mating years. Plainer body sheep are also easier and quicker to crutch, with a recent DAFWA study showing that 10 per cent more time is required to crutch a breech wrinkle score 3 than a breech wrinkle score 2.

Selecting for indicator traits to increase the resistance of your flock to breech strike will lead to more robust sheep with increased flock fertility and a higher sheep gross margin. The most important indicator trait in our environment is dags. Now is a good time to select for dag score. Animals with dag scores of 4 and 5 should be culled and only rams with no or with a dag score of one should be used for breeding.

There is no down side to selecting for breech strike resistance - you get less breech strike, more robust animals and more profitable sheep. It is good for all farming systems; non mulesed or mulesed.



AMSEA Wrinkle score x Greasy Fleece Weight ASBV



DAFWA trials the Te Pari Patesco tailing knife

Recently, DAFWA used the Te Pari knife in a tailing trial which was aimed at investigating the effectiveness of the knife in reducing dags and subsequent flystrike. The Te Pari is a type of tail docking iron that works in a similar fashion to normal docking irons but has a rotating anvil. When used correctly the knife should stretch the woolly skin producing a bare area on the top of the tail where wool would normally grow and be at risk of urine stain and dags.

The trial will continue into the spring, but preliminary results from marking indicate that the knife produced on average 1.3cm of bare skin on the tip of the docked tail. This bare tip ranged in length from 0cm to 3.7cm (photos below), even when used by the same operator. This variability may be due to lamb size or other factors such as dags and analysis of the data is continuing. Animals will be remeasured at weaning time for bare tip measurements and dag scores. It is expected that this bare tip will have an effect on dag formation and subsequent flystrike but this is unknown at this stage in the trial.

