

# Transitioning to Non-Mulesed Sheep

## Producer Case Study: South West Slopes Group

### Project Overview

The Meat & Livestock Australia (MLA) funded “Transitioning Towards Non-Mulesed Sheep” Producer Demonstration Site (PDS) project, aimed to support sheep producers transition to non-mulesed (TNM) flocks through utilising existing tools and resources available. This was successfully achieved with the development of individual 5-year plans and also through holding regular group meetings and upskilling producers participants.

Each producer had the opportunity to run a demonstration on their property to identify key management practices involved with running a non-mulesed flock, as well as recognising various pathways of achieving this.

### Key Findings

- It takes time to go non-mulesed and having a plan helps with long term management strategies.
- Management practices such as tail docking carried out at lamb marking, and how this is carried out can determine the lifetime management of the animals.
- Compared to mulesed animals, non-mulesed animals need to be monitored more in the first 18 months of life.
- NSW South West Slopes Project Group was very valuable with providing support and discussions for producers involved.

### Sire Evaluation Demonstration – Jugiong, NSW

One producer ran a sire evaluation style demonstration, where rams were separated into two sire groups (5 rams per group), one with high Early Breech Wrinkle (EBWR) ASBV's and one with

low EBWR ASBV's. Other ASBV trait values were kept as similar as possible between the two sire groups. Breech wrinkle has a moderate heritability of 0.38.

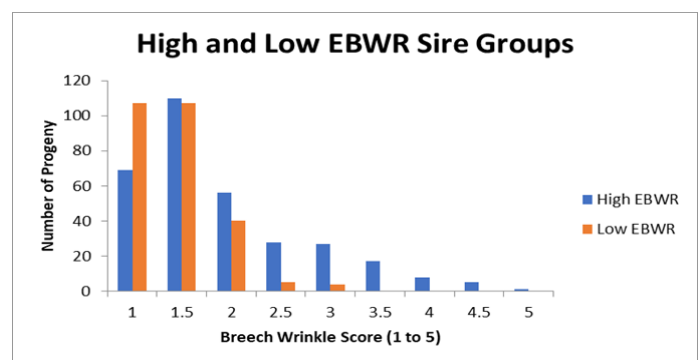


Figure 1 Distribution of Breech Wrinkle Scores for the progeny of the High and Low EBWR ASBV Sire Groups

A key outcome from this demonstration was that lambs born from the sires in the high EBWR group had a range of 1 to 5 visual scores for breech wrinkle at lamb marking, while the lambs born from the low EBWR sire group ranged between 1 and 3 breech scores (See Figure 1).

#### BREECH WRINKLE – LAMBS (BRWR)

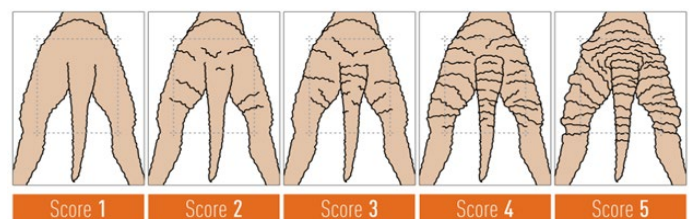


Figure 2 Visual Score guide for breech wrinkle scoring at lamb marking, up to 10 weeks of age.

There were no major differences seen between the two progeny groups at weaning with only a 1.2kg difference. Fleece weights were also not notably different between the two progeny groups, with only a 0.2kg fleece difference.

*“I was surprised to see how quickly we can make some big changes within our flock, from breeding and ram selection.” Robynn Sargent, Harden*

Following the Sire Evaluation demonstration, the host producer has begun looking at additional health and welfare traits when purchasing rams. These traits are important for moving to non-mulesed and include Early Breech Wrinkle, Dag, Worm Egg Counts and Fleece Rot.

## Tail Docking Methods – Jugiong, NSW

Another NSW producer ran a demonstration comparing five different tail docking methods. These included the Te-Pari Patesco hotknife, Leader hotknife – straight, Leader hotknife – used on a 45° angle, Rings with Numnuts applicator, Steinfort hotknife – Model year 2021.

A mob of single born lambs out of maiden ewes were randomly allocated to each tail docking method treatment. This mob of lambs was selected to reduce any impacts of ‘feed wrinkle’ on the demonstration results. Breech wrinkle influenced by the environment in which the lamb is born for example, variations in birth type and dam age; as twin born lambs naturally have less wrinkle than single born lambs.

Each treatment group was visually scored multiple times for a range of welfare traits that are important for non-mulesed flocks. These included Early Breech Wrinkle and Breech Cover scoring at marking, with body, neck and breech wrinkle scores collected off shears at a post weaning age (200 days of age), as well as two dag and urine scores when challenged (190 & 320 days of age).



Image 1 Lucinda Eddy capturing the first urine and dag scores on the demonstration mob, pre shearing.

Visual scores were collected in accordance with the AWI & MLA ‘Visual Sheep Scores’ booklet. The SheepMetriX team also developed a tail coverage

score (1 to 5) to determine if the various tail docking techniques resulted in more or less wool coverage over the tip of the tail.



Image 2 The Visual Score Guide for dag and the cohort of demonstration sheep scored for the second time.

Within this trial mob, there was a range of wool coverage over the tail for each of the different docking methods, with some tail docking methods being more favourable than others based on the scoring system that was developed for this project. It is important to remember that the outcome for this demonstration may vary from farm to farm depending on the amount of wrinkle present on the lambs and the person(s) carrying out the tail docking.

*“Having these wrinkle scores (early breech and off shears body and breech wrinkle scores) will allow us in the future to strategically join these ewes to our rams to assist our non-mules journey.” Tom Macleay, Jugiong*

Additionally, many of the other producers involved within the project had anecdotal agreement that taking extra care at lamb marking is critical to ensuring that procedures, such as tail docking, are performed to a high standard to ensure maximum animal welfare outcomes and ease of management later in life.

*“If the tail was not docked evenly there was a fair bit of wool left covering the tip of the tail, we had a harder time managing these animals in later life. They were more prone to get breech strike or be daggy and need assistance.” Mark Tiedemann, Young.*

## Breech Wrinkle Scoring Methods – Harden, NSW

Another demonstration which was run in the NSW South West Slopes TNM group was comparing breech wrinkle scoring of the lambs standing freely

versus in a rotating marking cradle. The findings from this demonstration was that there is no significant difference in the average scores produced from the two different scoring methods and the key to any visual scoring is consistency in the method and person scoring.

2021 drop	Ave. EBWR standing	Ave. EBWR cradle
Female	2.5	2.6
Male	2.6	2.6
<b>Total</b>	<b>2.5</b>	<b>2.6</b>

Table 1. Average early breech wrinkle (EBWR) scores by sex for the different scoring methods; standing versus in a rotating cradle.

It was observed that the advantages of scoring in the lamb marking cradle included knowing that each lamb will be assessed as they rotate past the assessor and provides the opportunity to capture additional data such as breech cover and sex.

### Running A Small Non-Mulesed Flock – Young, Murringo & Harden, NSW

A number of the project participants ran a smaller non-mulesed mob while still having a larger mulesed mob, this enabled the producers to observe the different management and requirements in their environment and management systems. This approach was observed by multiple producers at various locations around the NSW South West Slopes region. Some common trends were seen when comparing their management procedures, with multiple producers finding that extra monitoring of the younger non-mulesed stock was necessary.

*“In the non-mulesed mob we needed to take more care up to 18 months old, then we didn’t seem to find many management differences between the mulesed and non-mulesed mobs.” Linda Stewart, Harden*

*“Because we were monitoring our non-mulesed flock a bit more we were picking up other health issues*

*sooner, particularly the worms this season (2023).” Mark Tiedemann, Young*

Three of the five producers who tried running a non-mulesed mob were currently shearing 6-monthly. These producers found that there were no major changes that needed to be made to their overall management calendars in order to accommodate the non-mulesed flock.

*“Within our production system we are 6 monthly shearing, and there didn’t seem to be much difference in the management of the two groups (mulesed and non-mulesed mobs), we didn’t need to add an extra crutch.” Angus Campbell, Harden*

Collectively, the project participants found that the amount of chemical used and additional labour and time needed for extra monitoring of stock depended greatly on the seasonal conditions and fly strike risk.

### Project Outcomes

In conclusion, transitioning to non-mulesed does not have to be scary. It is essential to understand your starting position in relation to key breech fly strike indicator traits and to have short, medium and long term goals and strategies to work towards. Developing strategies to help make important management and selection decisions on farm will be an important step with planning your transitioning journey. Talking to other producers who have transitioned to non-mulesed who have been in similar situation, to hear and see what their journey was like, what their key challenges were and how they overcame them will assist in building confidence to start your journey.



Image 3 Hands on training with producers for assessing the visual wool quality scores at the project Field Day in 2023.

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