

About Visual Breech Scores

The recording of Visual Breech Scores and selection for these traits has the potential to reduce the susceptibility of sheep to breech flystrike.

Following extensive industry consultation, Australian Wool Innovation Limited (AWI) and Meat and Livestock Australia (MLA) has developed this breech scoring system to:

- Provide a quick and simple breech scoring system to help ram breeders and commercial producers select sheep for desirable breech characteristics that are less susceptible to flystrike; and
- Estimate the heritability of these Visual Breech Scores (traits) and measure their impact, if any, on important production traits such as fleece weight, fibre diameter and body weight.

These Visual Breech Scores have also been developed with the aim of generating sufficient data (**on unmulesed animals only**) to assist Sheep Genetics with the development of Australian Sheep Breeding Values (ASBVs) for each of these traits.

Sheep Genetics, a joint initiative of AWI and MLA, is designed to enable ram breeders and commercial producers to compare animals from different flocks on genetic merit (by ASBVs) using measured and visually scored data.



Desirable breech traits

Breech flystrike of sheep is a consequence of wrinkle and wool in the breech area that allows wet dags (urine and/or faeces) to create an environment conducive to the laying and hatching of blowfly larvae.

Research has already shown that each of the following are valuable tools to reducing susceptibility to breech flystrike but, individually, are not enough to significantly reduce breech flystrike:

- selection for plain (no wrinkle) breech;
- selection for reduced wool cover on the breech; and,
- selection against the tendency to scour, and form dags.

It is believed that genetic improvement of breech flystrike resistance of sheep can be achieved through the complementary selection of animals for the following four 'indicator' traits:

1. Breech Wrinkle
2. Breech Cover
3. Crutch Cover
4. Dag Score

Consequently, this set of Visual Breech Scores has been developed for each trait and various age groups. AWI-funded research is underway to investigate the effects of breeding and the selection of Merino sheep using this breech scoring system over a range of environments.

The effectiveness and commercial impact of breeding for these 'indicator' traits, however, will remain unknown until this research is completed.

Using Visual Breech Scores

Visual Breech Scores provide standard scores for physical breech traits that are thought to reduce the susceptibility of Merino sheep flocks to breech flystrike.

This guide contains a set of Visual Breech Scores of 1 to 5 for four traits – Breech Wrinkle, Breech Cover, Crutch Cover and Dag.

In each case, Score 1 depicts LEAST expression of the trait and Score 5 depicts MOST expression (i.e. rule of thumb is Score 1 is LESS and Score 5 is MORE of each trait).

These scores are available for use by ram breeders and commercial woolgrowers who choose to score animals and select on these traits for breech flystrike resistance. If doing so, it should be remembered that mulesing can affect the physical expression (and breech score) of each trait.

Data gathered on individual animals (**unmulesed only**) may be submitted to Sheep Genetics with other pedigree and performance information to assist with the development of across-flock ASBVs for traits for breech flystrike resistance.

Visual Breech Scores can be taken on both male and female sheep at various ages. It is essential to record the age of the animal when scores are taken, recommended in the table below.

Remember, profitable selection is based on identifying traits that have significant commercial value. When selecting traits for your breeding objective, ensure the selection balance is maintained. Be mindful of all traits that determine the commercial profitability and quality of your flock.

Please note: the visual breech traits and contained in this guide replace the visual standards and scoring scale contained in the *AWI Visual Breech Scores* guide published in May 2006.

Trait	Age	When
Breech Cover	6 to 10 weeks Over 4 months	Lamb marking, preferably in the cradle Anytime, ideally at weaning or classing
Crutch Cover	Over 4 months	Anytime, ideally at crutching or shearing
Breech Wrinkle	6 to 10 weeks Over 4 months	Lamb marking Crutching or post-shearing
Dag	Over 4 months	Prior to crutching

For further information about the development or use of these Visual Breech Scores contact:

AWI Helpline 1800 070 099 or visit www.wool.com.au

Breech Cover – Lambs

Age: 6 to 10 weeks.

When: Lamb marking, preferably in the cradle.

Breech Cover score refers to the amount of natural bare skin around the perineum and breech area, in particular, the depth and width of bare skin below and surrounding the vulva or anus.

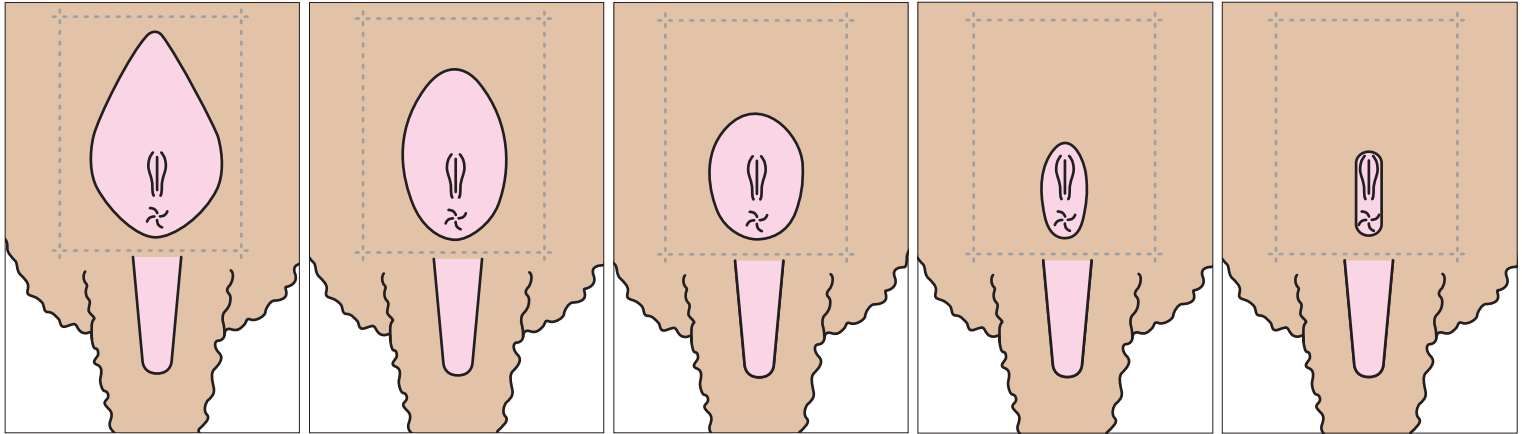
Note: only visual scores on unmulesed animals (or lambs prior to mulesing) can be submitted to Sheep Genetics.

How to score: A single score of 1, 2, 3, 4 or 5.

Rule of thumb: A Score 1 animal has natural bare area that extends outwards around the anus and vulva, and right down to the bottom of the breech area (the channel). An animal with Score 5 has complete **(most)** wool cover i.e. no natural bare area at all.



Breech Cover – Lambs



Score 1

Score 2

Score 3

Score 4

Score 5

Breech Cover

Age: Over 4 months.

When: Anytime, ideally at weaning or classing.

Breech Cover score refers to the amount of natural bare skin around the perineum and breech area, in particular, the depth and width of bare skin below and surrounding the vulva or anus.

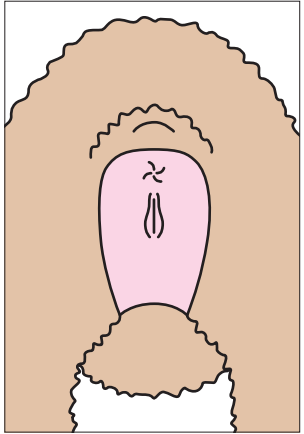
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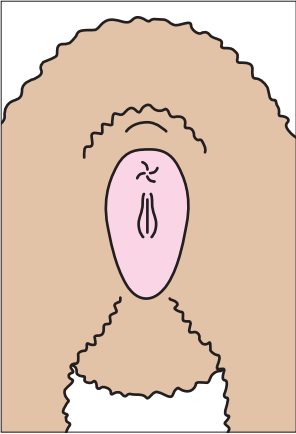
Rule of thumb: A Score 1 animal has natural bare area that extends outwards around the anus and vulva, and right down to the bottom of the breech area (the channel). An animal with Score 5 has complete **(most)** wool cover i.e. no natural bare area at all.



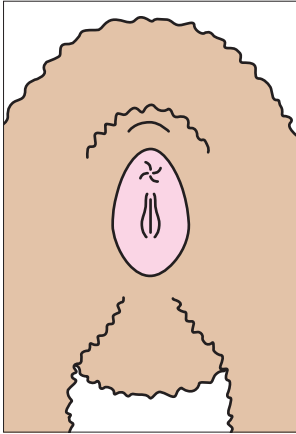
Breech Cover



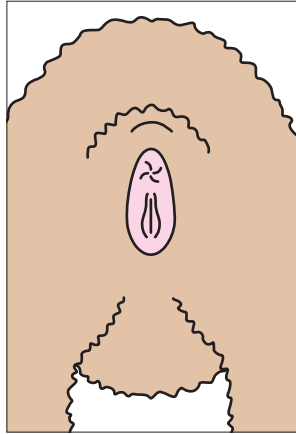
Score 1



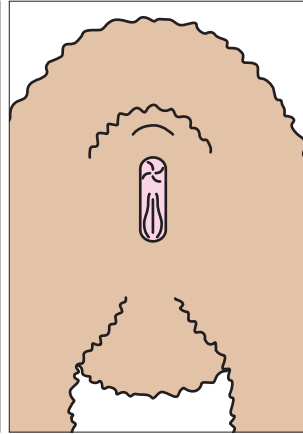
Score 2



Score 3



Score 4



Score 5

Crutch Cover

Age: Over 4 months.

When: Anytime, ideally at crutching or shearing.

Crutch Cover score refers to the amount of natural bare skin from which wool would normally be removed by the first blow during crutching, in particular, the pubic area, groin and inside back legs.

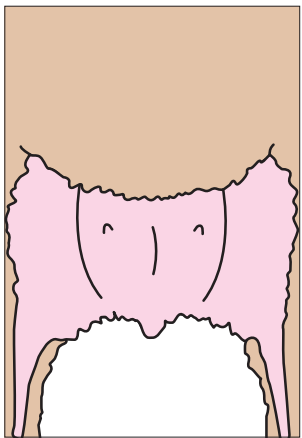
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How to score: A single score of 1, 2, 3, 4 or 5.

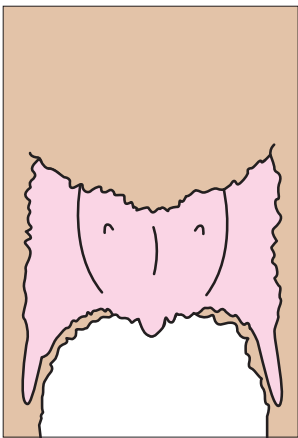
Rule of thumb: A Score 1 animal has natural bare area that extends completely throughout the pubic and groin region, and extends through to the animal's breech, as well as right down the inside back legs beyond the hocks. An animal with Score 5 has complete **(most)** wool cover i.e. no bare area at all.



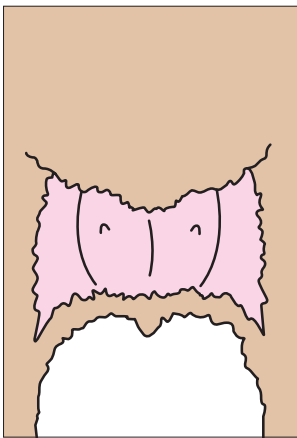
Crutch Cover



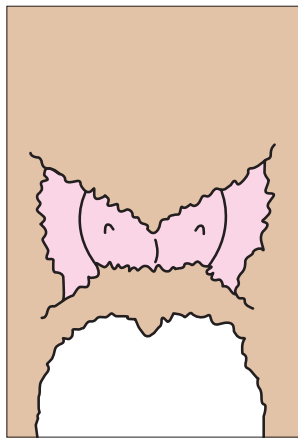
Score 1



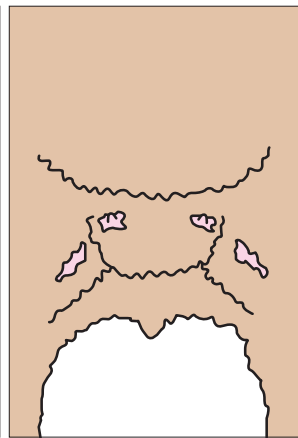
Score 2



Score 3



Score 4



Score 5

Breech Wrinkle – Lambs

Age: 6 to 10 weeks.

When: Lamb marking.

Breech Wrinkle refers to the degree of wrinkle at the tail set and down the hind legs.

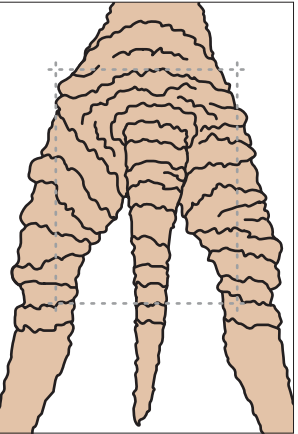
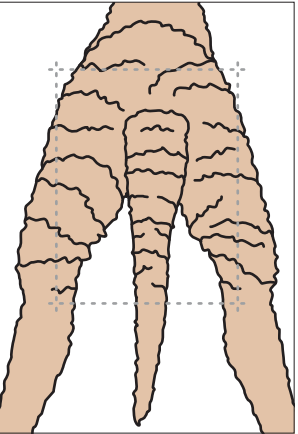
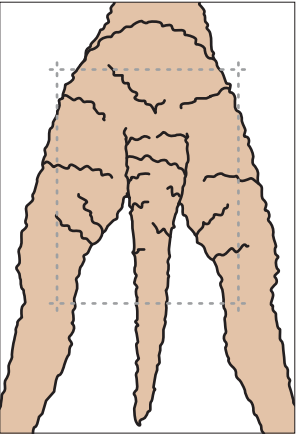
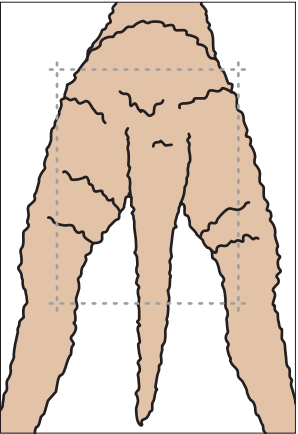
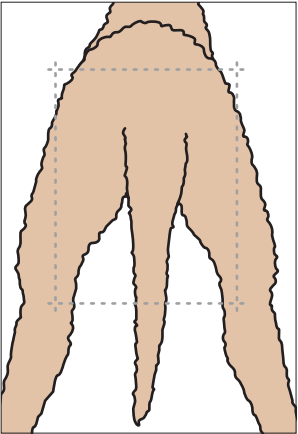
Note: visual scores on unmulesed animals only (or lambs prior to mulesing) can be submitted to Sheep Genetics.

How to score: A single score of 1, 2, 3, 4 or 5. The highest score of either the tail set or leg zone is recorded.

Rule of thumb: An animal with Score 1 has no wrinkle. A Score 5 animal has extensive wrinkle at the tail set and extending down the hind legs to the hocks.



Breech Wrinkle – Lambs



Score 1

Score 2

Score 3

Score 4

Score 5

Breech Wrinkle

Age: Over 4 months.

When: Crutching or post-shearing.

Breech Wrinkle refers to the degree of wrinkle at the tail set and down the hind legs.

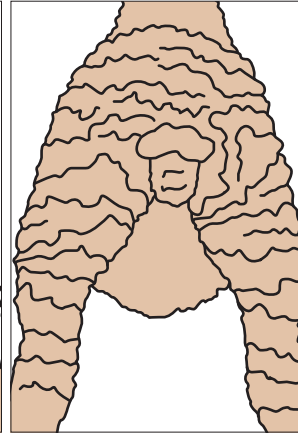
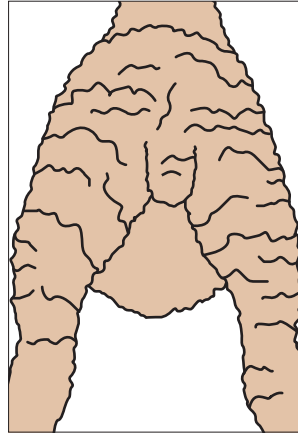
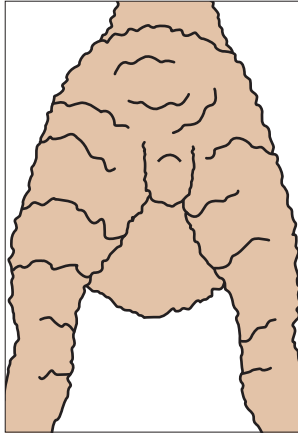
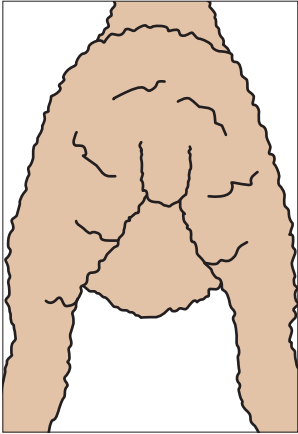
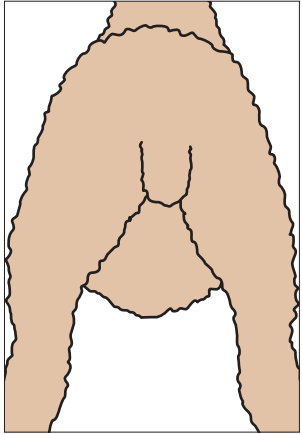
Note: visual scores on unmulesed animals only (or lambs prior to mulesing) can be submitted to Sheep Genetics.

How to score: A single score of 1, 2, 3, 4 or 5. The highest score of either the tail set or leg zone is recorded.

Rule of thumb: An animal with Score 1 has no wrinkle. A Score 5 animal has extensive wrinkle at the tail set and extending down the hind legs to the hocks.



Breech Wrinkle



Score 1

Score 2

Score 3

Score 4

Score 5

Dag

Age: Over 4 months.

When: Prior to crutching; 60 days following 'the break' to the dominant rainfall season or when 30 to 40 per cent of flock is scouring.

Dag formation is caused by the adhesion of faecal material to the breech area. Dag scores refer to the quantity of faecal material adhering to the wool surrounding the breech and extending down the hind legs.

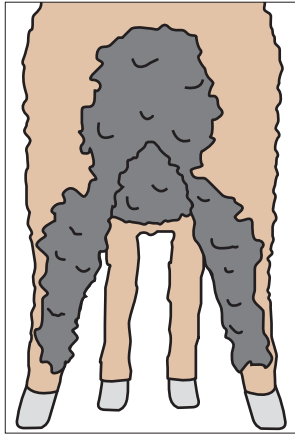
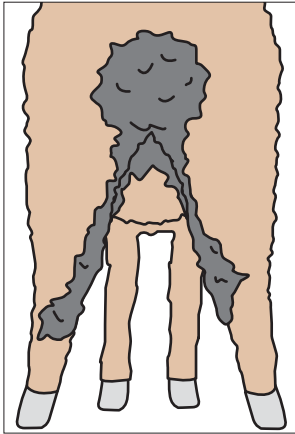
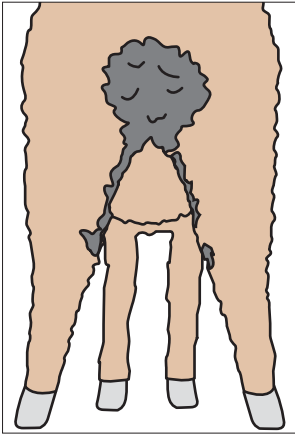
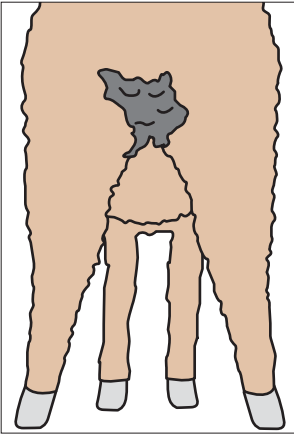
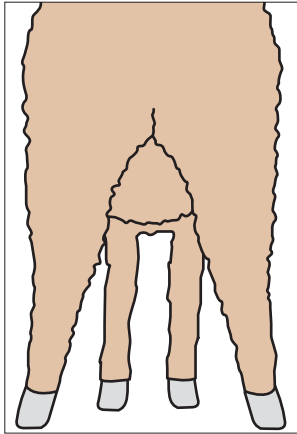
Note: visual scores on unmulesed animals only (or lambs prior to mulesing) can be submitted to Sheep Genetics.

How to score: A single score of 1, 2, 3, 4 or 5.

Rule of thumb: An animal with Score 1 has no dags. A Score 5 animal has extensive dags not only remaining in the breech area, but extending right down the hind legs to the pasterns.



Dag



Score 1

Score 2

Score 3

Score 4

Score 5

Acknowledgements

AWI sincerely acknowledges the time and commitment provided by all sheep breeders, classers and researchers involved in the development of this guide, in particular members of the Executive Committee of the Australian Merino Sire Evaluation Association.





Disclaimer

In compiling the information contained in these Visual Sheep Scores, Australian Wool Innovation Limited and Meat and Livestock Australia Limited has used its best endeavours to ensure that the information is correct and current at the time of publication but takes no responsibility for any error, omission or defect therein.

These Visual Sheep Scores cover the information required to score sheep for use as an additional tool in selection and breeding decisions. Selection of traits to include in breeding objectives involves identifying profitability of all aspects of sheep and wool production. Use of these scores for selection and breeding should be carried out with appropriate guidance.

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