Visual Sheep Scores

Version 2 – 2013

awi Australian Wool Innovation Limited

mla MEAT & LIVESTOCK AUSTRALIA

About this guide

Visually assessed traits are included in the breeding objective of all stud and commercial sheep breeders, regardless of their target market or environment.

In 2007, following extensive industry consultation, Australian Wool Innovation (AWI) & Meat and Livestock Australia (MLA) developed the Visual Sheep Scores to:

- Provide the Australian sheep industry with a standardised set of visual assessment scores for the consistent description of important phenotypic traits of all breeds of sheep;
- Develop a quick and simple scoring system to help sheep classers and breeders select sheep on visually-assessed traits to accelerate genetic gain;
- Enable sheep breeders and classers to record and submit visual score data and genetic information to Sheep Genetics to progress development of across-flock Australian Sheep Breeding Values* (ASBVs) for visually-assessed traits; and
- Enable researchers to estimate the heritability of visually-assessed sheep traits, and to measure their relationships, if any, on important production traits such as fleece weight, fibre diameter, growth rate and body weight.

In 2012, the Visual Sheep Scores were reviewed in order to update them to the current requirements of the industry.

In addition, the visual standards and scoring system contained in this guide are endorsed by the Australian Merino Sire Evaluation Association (AMSEA), and include all compulsory traits visually assessed at Central Test Sire Evaluation sites across Australia.

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.

* Developed by Sheep Genetics, a joint initiative of AWI & MLA, ASBVs enable ram breeders and commercial sheep producers to compare the genetic potential of rams and ewes for a range of production traits, independent of the environment and location.

Using Visual Sheep Scores

This guide provides the Australian sheep industry with a common language for the visual description, recording and classing of all breeds of sheep according to important visual traits.

Visual Sheep Scores are designed for ram and commercial flock breeders that choose to class and select sheep on one or any number of visually-assessed traits as part of their overall breeding objective.

Visual scores gathered on individual sheep may be submitted to Sheep Genetics with other pedigree and performance information to assist the sheep industry with the development of across-flock ASBVs for visually-assessed traits.

Designed for use on both male and female sheep equally, the Visual Sheep Scores provided in this guide have been divided into four sections:

1. Wool Quality traits
2. Conformation traits
3. Breech traits
4. Classer's Grade

A set of illustrative standards and simple instructions on 'how' and 'when' to visually score sheep are provided for each trait, however, unless otherwise stated:

- A single score of 1, 2, 3, 4 or 5 is recorded for each trait; and
- Score 1 depicts LEAST expression and Score 5 depicts MOST expression of the trait.

Sheep should be scored relative to the score diagrams in this booklet. The scores should **not** be distributed across the flock being scored from 1 to 5 irrespective of the range in the flock. Sheep should also **not** be scored according to the scorers perception of 'Least' or 'Most' – sheep must be scored according to the diagrams with the aid of the words that describe the trait.

Using Wool Quality Scores

Visual Wool Quality Scores provide visual standards for the description of physical fleece and fibre traits that contribute to the economic value of wool.

These scores are designed for ram breeders and commercial woolgrowers who choose to class and select sheep on one or more of these visual traits as part of their overall breeding objective.

This guide contains a set of Wool Quality Scores for 10 traits. Visual scores of 1 to 5 are provided for eight traits, and scores of 1 and 5 only for the two binary traits (i.e. a 'yes' or 'no' expression of the trait, as in recessive black and random spot).

With the exception of wool character, 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).

In most cases, a single score is recorded for each trait. The exceptions are fibre pigmentation and non-fibre pigmentation, where scores at five and three sites, respectively, are recorded for these traits.

In addition, it is essential that the two pigmentation traits random spot (Australian piebald) and recessive black (Agouti gene) are scored and recorded separately from fibre pigmentation.

Data gathered on individual sheep may also be submitted to Sheep Genetics with other pedigree and performance information to assist the sheep industry with the development of across-flock ASBVs for various wool quality traits.

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

Wool Trait	Age	When
Fleece rot	• Over 6 months	• Anytime, provided a minimum of 5 months of wool growth
Wool colour	• Over 6 months	• Anytime, provided a minimum of 5 months of wool growth
Wool character	• Over 6 months	• Anytime, provided a minimum of 5 months of wool growth
Dust penetration	• Over 6 months	• Anytime, provided a minimum of 5 months of wool growth
Staple weathering	• Over 6 months	• Anytime, provided a minimum of 5 months of wool growth
Staple structure	• Over 6 months	• Anytime, provided a minimum of 5 months of wool growth
Fibre pigmentation	• 6 to 10 weeks	• Lamb marking*
Non-fibre pigmentation	• 6 to 10 weeks	• Lamb marking*
Recessive black	• 6 to 10 weeks	• Lamb marking*
Random spot	• 6 to 10 weeks	• Lamb marking*

* Score data can be submitted to Sheep Genetics if pigmentation is identified after lamb marking such as classing or shearing.

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

Sheep Genetics
Tel: 02 6773 2948 Email: info@sheepgenetics.org.au
Web: www.sheepgenetics.org.au

Australian Merino Sire Evaluation Association
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Web: www.merinosuperiorsires.com.au

Fleece rot (FLROT)

Age: Over 6 months and after a significant fleece rot challenge.

When: Anytime, provided a minimum of 5 months of wool growth and preferably after a significant fleece rot challenge and before dust is deposited in the effected wool.

Fleece rot is caused by high humidity leading to multiplication of fleece rot bacterial at skin level and as a result causes staining and in more severe cases exudate from the skin. Fleece rot score refers to the width of the band in the wool of stain and/or crusting that result from fleece rot bacteria. Stained bands can be yellow, green, red-orange, pink-violet, blue, brown or grey in colour. Crusting results from skin exudate deposited in the wool and when fresh or the fleece is wet, it may be soft however still gives the feel of extra staple thickness.

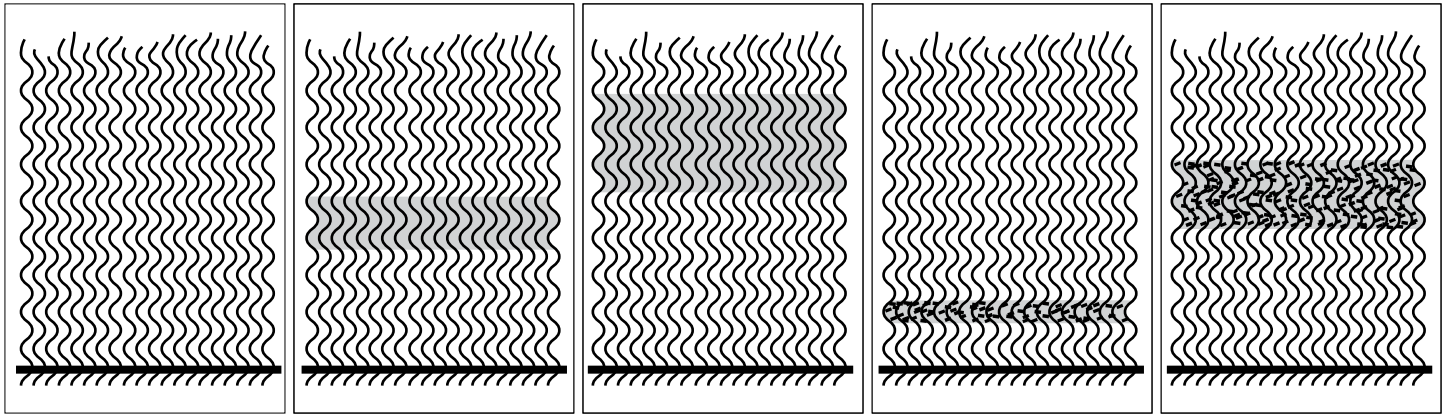
Note: fleece rot should not be confused with Dermatitis (or 'lumpy wool'), which tends to form columns of hard lumps along the staple.

How to score: Open the fleece at a minimum of **three sites** along the full length of the backline and look for evidence of bands of stain and crusting. The highest score across the sites is recorded as the score.

Rule of thumb: A sheep with Score 1 has no staining or crusting. A sheep with Score 5 has a band/s of 'crusting' greater than 5 millimetres wide, with or without stain.

Score 1:	Score 2:	Score 3:	Score 4:	Score 5:
No band of stain or crusting.	Band of stain <10mm wide. No crusting.	Band of stain >10mm wide. No crusting.	Band of crusting <5mm wide, with or without stain.	Band of crusting >5mm wide, with or without stain.

Fleece rot (FLROT)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Wool colour (COL)

Age: Over 6 months.

When: Anytime, provided a minimum of 5 months of wool growth.

Wool colour describes the intensity of whiteness and yellowness of greasy wool. The degree of yellow may vary within a score however score the intensity colour.

How to score: Open the fleece at a minimum of **three sites** – side of shoulder, mid-side and hip. The highest score across the sites is recorded.

Rule of thumb: A sheep with Score 1 has the 'brightest' white wool, whereas a Score 5 sheep has a very intense type of yellow.

Score 1:

Has a bright white wool.

Score 2:

Has an off white wool.

Score 3:

Has a mild yellow wool.

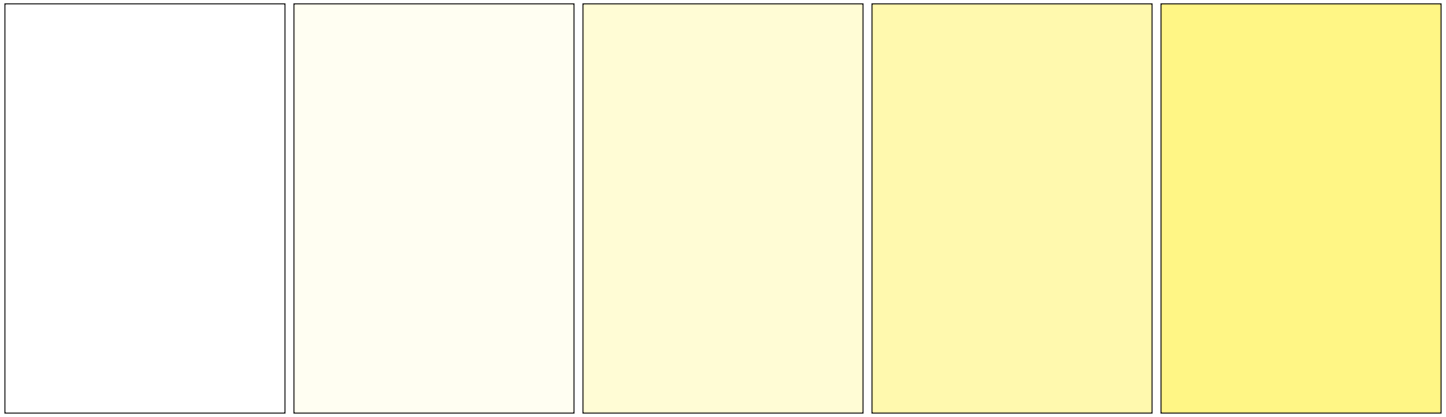
Score 4:

Has an intense yellow wool.

Score 5:

Has a very intense yellow wool.

Wool colour (COL)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Wool character (CHAR)

Age: Over 6 months.

When: Anytime, provided a minimum of 5 months of wool growth.

Wool character describes the definition of crimp.

How to score: Open the fleece cleanly at a minimum of **three sites** along the middle of the side of the sheep from shoulder to hip. Evaluate the crimp definition along the length of the staples and across all staples at the site. The highest score across the sites is recorded.

Rule of thumb: A sheep with Score 1 has well-defined crimp along the entire length of the staples observed at the opening. A Score 5 sheep has 'flat' wool due to lack of crimp definition.

Score 1:

Very well defined crimp.

Score 2:

Well defined crimp.

Score 3:

Crimp definition is lacking.

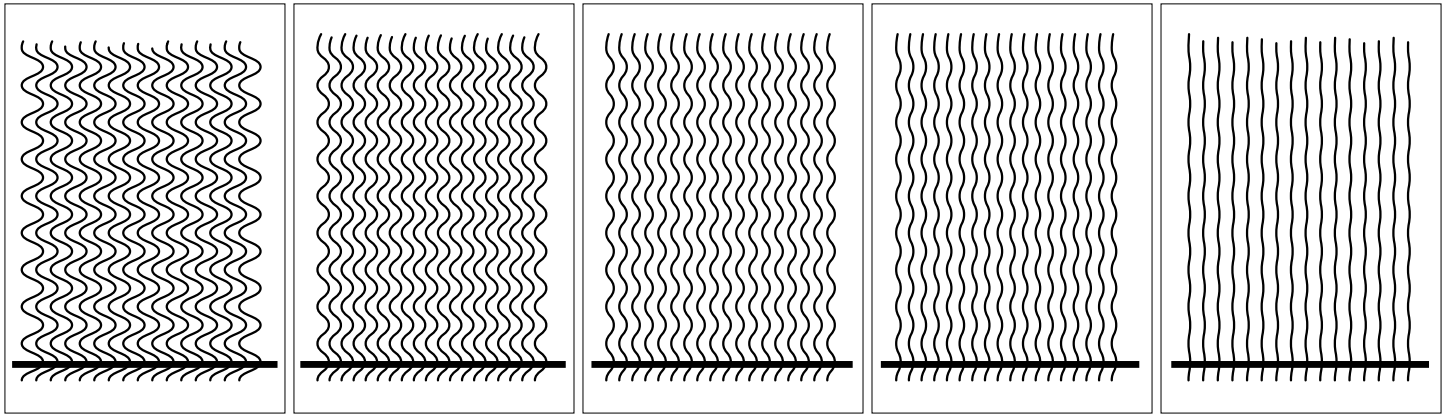
Score 4:

Crimp definition is severely lacking and the staples start to look 'flat'.

Score 5:

No crimp definition and as a result looks 'flat'.

Wool character (CHAR)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Dust penetration (DUST)

Age: Over 6 months.

When: Anytime, provided a minimum of 5 months of wool growth.

Dust penetration is the degree of a solid level (not just light or flaky) dust penetration down the staple.

Note: Dust penetration and staple weathering can be confounding traits. Depending on environment and season, only one trait may need scoring.

How to score: Open the fleece at a minimum of **three sites** along the full length of the backline. The highest score across the sites is recorded as the score.

Rule of thumb: A sheep with Score 1 has no significant dust penetration. A Score 5 sheep has dust penetration almost all, or all of the length of the staple.

Score 1:

Staple is free or near free of dust penetration with only the very tip of wool (<6% of staple) affected dust.

Score 2:

Staple has 6-20% solid level of dust penetration.

Score 3:

Staple has 21-40% solid level of dust penetration.

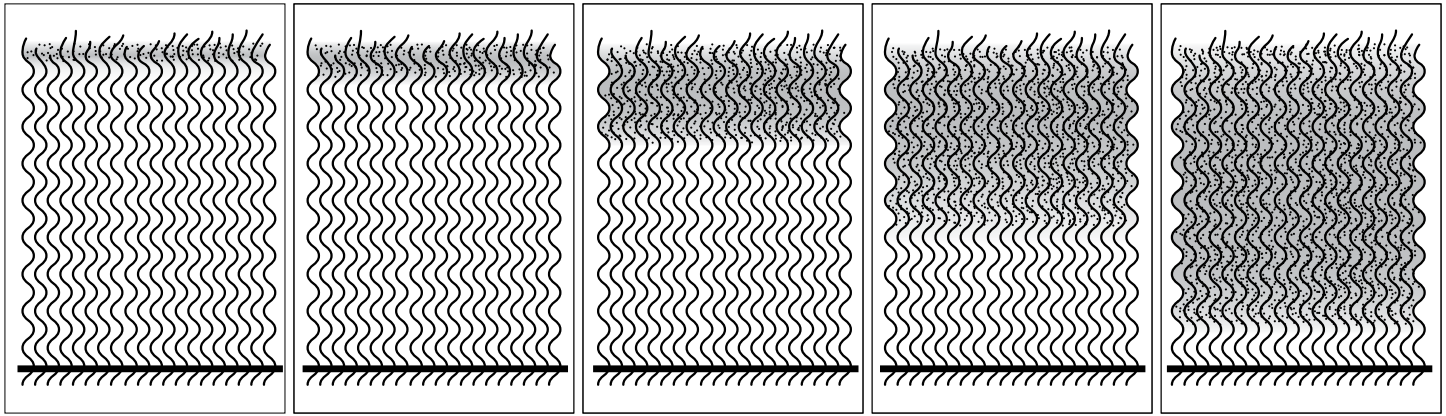
Score 4:

Staple has 41-70% solid level of dust penetration.

Score 5:

Staple has 71-100% solid level of dust penetration.

Dust penetration (DUST)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Staple weathering (WEATH)

Age: Over 6 months.

When: Anytime, provided a minimum of 5 months of wool growth.

Staple weathering is the degree of deterioration down the staple due to penetration of light and water, i.e. 'swollen' staple, and when more severe 'paint brush' tip.

Note: Staple weathering and dust penetration can be confounding traits. Depending on environment and season, only one trait may need scoring.

How to score: Open the fleece at a minimum of **three sites** along the full length of the backline. The highest score across the sites is recorded as the score.

Rule of thumb: A sheep with Score 1 has no significant deterioration of staple due to penetration of light and water. A Score 5 sheep has extensive deterioration of fibre structure along nearly all, or all of the length of the staple.

Score 1:

Staple is free or near free of deterioration (<6% of staple) due to penetration of light and water.

Score 2:

Staple has 6-20% deterioration due to penetration of light and water.

Score 3:

Staple has 21-40% deterioration due to penetration of light and water.

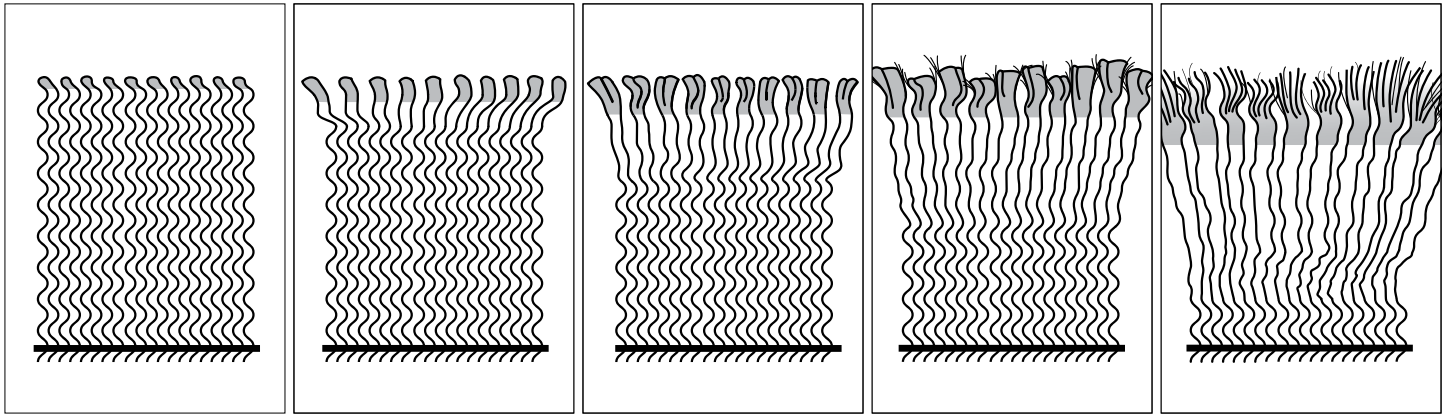
Score 4:

Staple has 41-70% deterioration due to penetration of light and water.

Score 5:

Staple has 71-100% deterioration due to penetration of light and water.

Staple weathering (WEATH)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Staple structure (SSTRC)

Age: Over 6 months.

When: Anytime, provided a minimum of 5 months of wool growth.

Staple structure describes the cluster arrangement of the fibre bundles comprising each staple, in particular the average diameter of the staples observed at an opening.

How to score: Open the fleece at a minimum of **three sites** along the middle of the side of the sheep from shoulder to hip. Evaluate the average diameter of the staples at an opening. The highest score across the sites is recorded.

Rule of thumb: A sheep with Score 1 has extremely fine fibre bundles (<5mm), whereas a Score 5 sheep has extremely large bundles of fibres (>30mm) which in general make the staples 'blocky' in appearance.

Score 1:

Staple comprises very fine bundles i.e. staple width of less than 6mm in diameter.

Score 2:

Staple comprises fine bundles i.e. staple width of 6-10mm in diameter.

Score 3:

Staple comprises medium bundles i.e. staple width of 11-20mm in diameter.

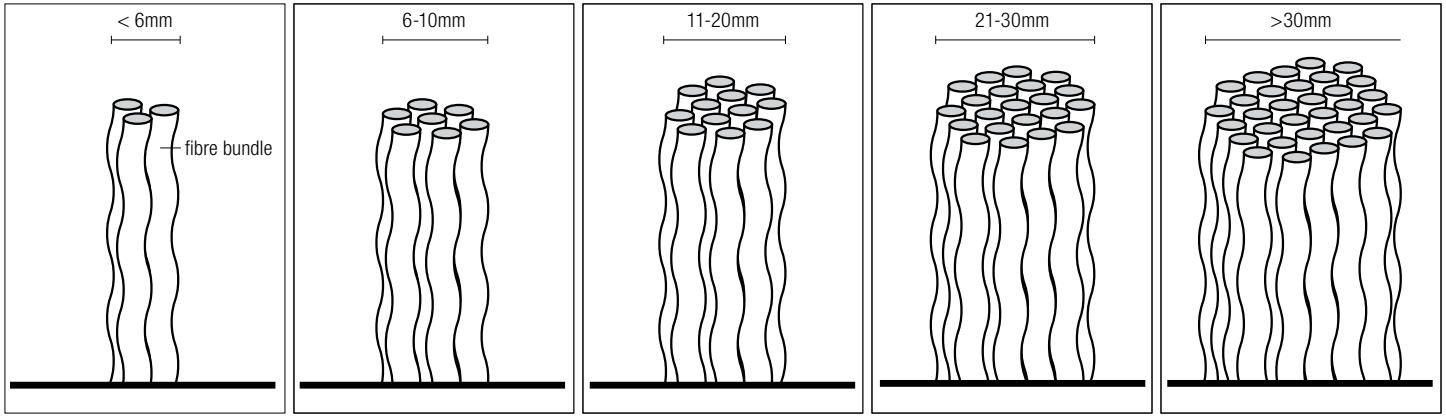
Score 4:

Staple comprises large bundles i.e. staple width of 21-30mm in diameter.

Score 5:

Staple comprises 'blocky', extremely large bundles i.e. staple width of greater than 30mm in diameter.

Staple structure (SSTRC)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Fibre pigmentation (FPIG)

Age: 6 to 10 weeks.

When: Lamb marking*.

Fibre pigmentation refers to the percentage of dark fibres at different sites of the sheep, in particular the body, legs, face, horn site, ears, eyelashes and back of neck (birthcoat halo-hair). Pigmented fibres are normally black, grey or red-tan in colour. Importantly, fibre pigmentation is scored separately from random spot (Australian piebald) and recessive black (*Agouti* gene).

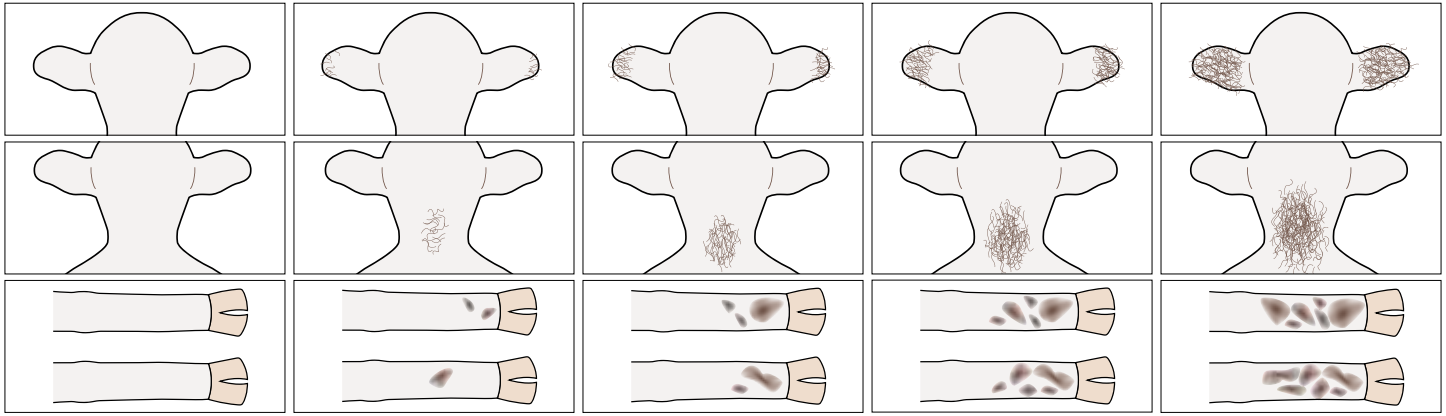
How to score: A single score of 1, 2, 3, 4 or 5 is recorded for **seven sites** – body, legs, face, horn site, ears, eyelashes and back of neck (birthcoat halo-hair).

Rule of thumb: If the body, ears, legs and eyelashes have no pigmentation (Score 1), but if 41-70% of the fibres on the back of neck pigmented, then Score 4 is the overall score recorded for the trait.

Score 1:	Score 2:	Score 3:	Score 4:	Score 5:
No pigmentation i.e. 0% pigmented fibres at any site.	1-20% pigmented fibres at one or more sites.	21-40% pigmented fibres at one or more sites.	41-70% pigmented fibres at one or more sites.	71-100% pigmented fibres at one or more sites.

* Score data can be submitted to Sheep Genetics if pigmentation is identified after lamb marking such as classing or shearing.

Fibre pigmentation (FPIG)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Non-fibre pigmentation (SPIG)

Age: 6 to 10 weeks.

When: Lamb marking*.

Non-fibre pigmentation refers to the percentage of pigmentation on the areas of the sheep, in particular the bare skin of the nose, lips, eyelids and hooves. Pigmented skin and hooves are normally brown-tan or black-grey in colour.

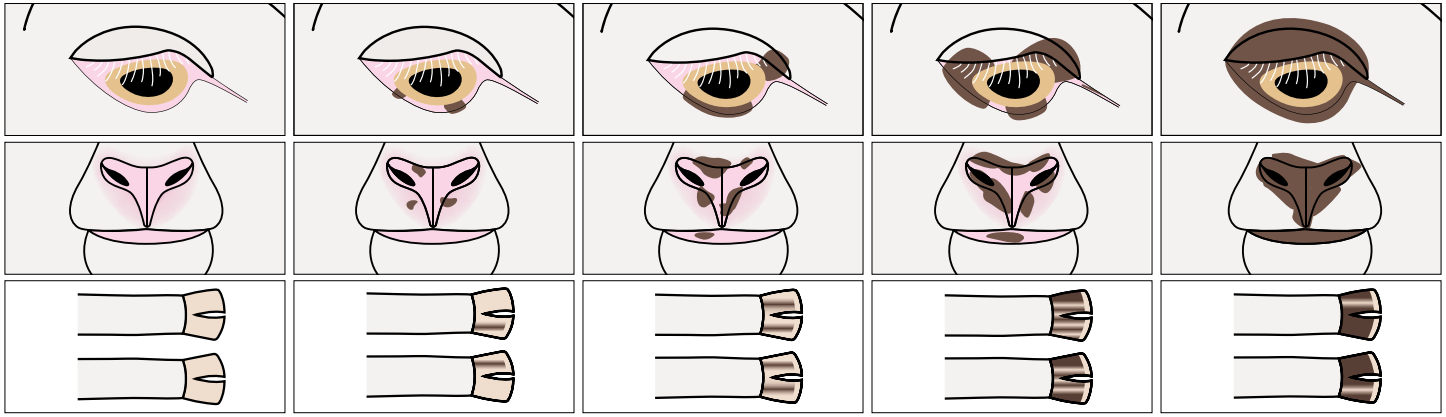
How to score: A single score of 1, 2, 3, 4 or 5, is recorded for **three sites** – nose/lips, eyelids and hooves.

Rule of thumb: A Score 1 sheep has no skin or hoof pigmentation at all. If a sheep has no pigmentation (Score 1) on the nose, lips or eyelids, but 41-70% of the total hoof area is pigmented (Score 4), then Score 4 is the overall score recorded for the trait.

Score 1:	Score 2:	Score 3:	Score 4:	Score 5:
No pigmented area i.e. 0% of all bare skin sites and all four hooves.	1-20% pigmented area of one or more bare skin sites and/or 1-20% of the total hoof area.	21-40% pigmented area of one or more bare skin sites and/or 21-40% of the total hoof area.	41-70% pigmented area of one or more bare skin sites and/or 41-70% of the total hoof area.	71-100% pigmented area of one or more bare skin sites and/or 71-100% of the total hoof area.

* Score data can be submitted to Sheep Genetics if pigmentation is identified after lamb marking such as classing or shearing.

Non-fibre pigmentation (SPIG)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Note: Score 5 diagrams shows 100% pigmented area of all bare skin sites. Score 5 does not need to be 100% pigmented.

Recessive black (BLK)

Age: 6 to 10 weeks.

When: Lamb marking*.

Caused by the *Agouti* gene, recessive black refers to the presence of pigmented wool or hair fibres anywhere on the face or body. Pigmented fibres can be black, dark and light grey, brown or tan in colour. Importantly, recessive black is scored separately from random spot and fibre pigmentation.

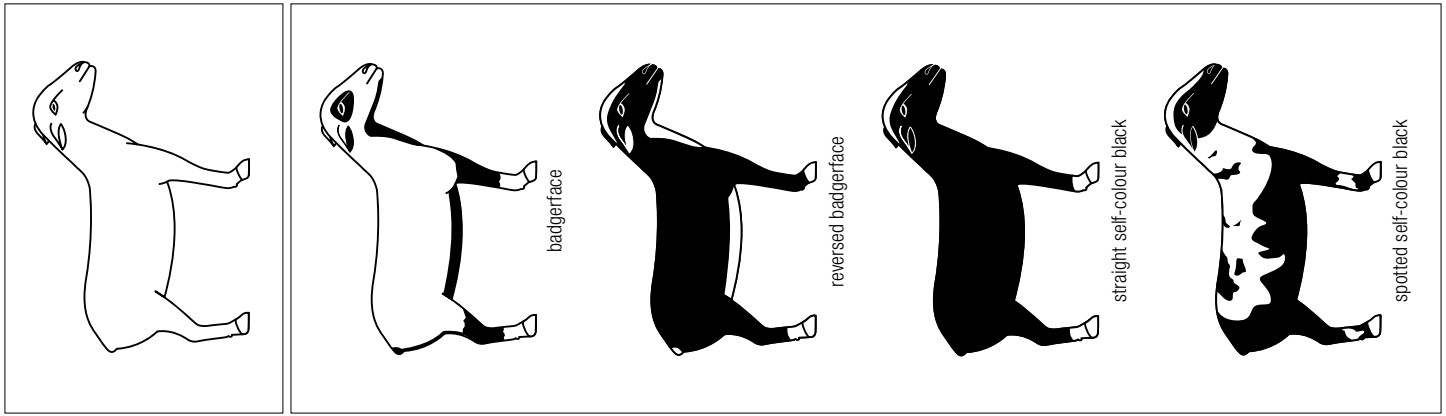
How to score: A single score of 1 or 5.

Rule of thumb: If a sheep has relatively symmetrical markings on both sides of the face then it is going to be one of the recessive black patterns (Score 5) of 'badgerface', 'reverse badgerface', 'straight self-colour black' or 'spotted self-colour black'.

Note: If the face is completely white or has a random pattern on one side of the face (i.e. non-symmetrical), the sheep should be scored as random spot.

* Score data can be submitted to Sheep Genetics if pigmentation is identified after lamb marking such as classing or shearing.

Recessive black (BLK)



Score **1** | Score **5**

Random spot (SPOT)

Age: 6 to 10 weeks.

When: Lamb marking*.

Random spot (Australian piebald) refers to the presence of a distinct patch of pigmented fibres anywhere on the face or body, ranging from small to large in size. Pigmented fibres are normally black-grey in colour. Importantly, random spot is scored separately from recessive black and fibre pigmentation.

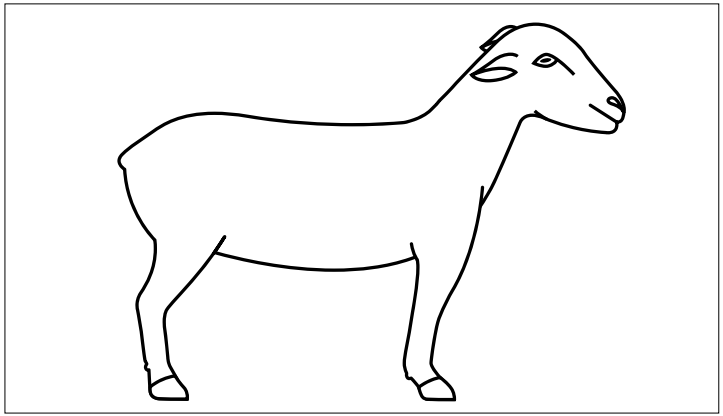
How to score: A single score of 1 or 5.

Rule of thumb: A random pattern is characterised as a rounded, pigmented wool or hair spot; usually only one or, if more than one, not symmetrically positioned (i.e. distributed unevenly to one side of the face or body).

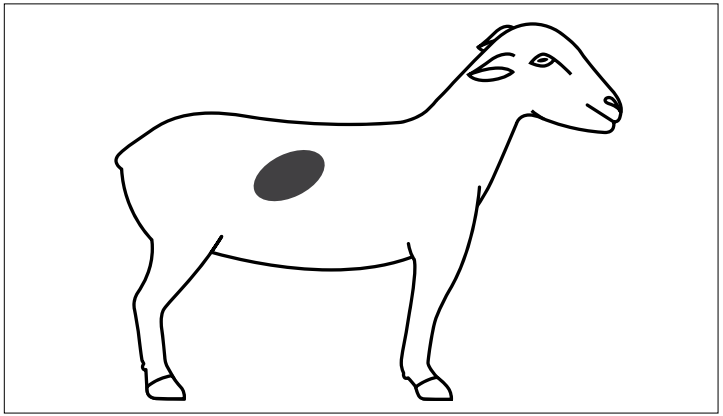
Note: If both sides of the face or body are spotted (i.e. symmetrical), the sheep should be scored as recessive black.

* Score data can be submitted to Sheep Genetics if pigmentation is identified after lamb marking such as classing or shearing.

Random spot (SPOT)



Score **1**



Score **5**

Using Conformation Scores

Visual Conformation Scores provide visual standards for the description of physical body and structural traits that influence the soundness and productivity of sheep flocks.

These scores are designed for ram breeders and commercial producers who choose to class and select sheep on one or more conformation visual traits as part of their overall breeding objective.

This guide contains a set of Visual Conformation Scores of 1 to 5 for five traits. Importantly, the 'Score 1 is LEAST' and 'Score 5 is MOST' scoring scale does not apply to three conformation traits – jaw, legs/feet and shoulder/back.

In these cases, Score 1 depicts 'INWARD' expression and Score 5 depicts 'OUTWARD' expression of the trait.

A single score is recorded for all conformation traits. This includes 'combined' traits (legs/feet and shoulder/back), where the highest score of the multiple sites is recorded.

Data gathered on individual sheep may also be submitted to Sheep Genetics with other pedigree and performance information to assist the sheep industry with the development of across-flock ASBVs for various conformation traits.

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

Conformation Trait	Age	When
Face cover	• Over 4 months	• Anytime, provided a minimum of 3 months of wool growth
Jaw	• Over 4 months	• Anytime
Legs/Feet	• Over 4 months	• Anytime
Shoulder/Back	• Over 4 months	• Within 1 month post shearing
Body wrinkle	• Over 4 months	• Within 1 month post shearing

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

Sheep Genetics
Tel: 02 6773 2948 Email: info@sheepgenetics.org.au
Web: www.sheepgenetics.org.au

Australian Merino Sire Evaluation Association
Tel: 02 6743 2306 Email: ben_swain@bigpond.com
Web: www.merinosuperiorsires.com.au

Face cover (FACE)

Age: Over 4 months.

When: Minimum of 3 months wool.

Face cover refers to the degree of wool cover on the face, including the top of head and jowl.

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

Rule of thumb: An sheep with Score 1 has an open face with no wool on the jowls or top of the head. A Score 5 sheep has wool covering its entire face, commonly referred to as 'wool blind'.

Score 1:

Open face with no wool in front of the ears and topknot, or on the jowls.

Score 2:

Wool cover over the top of head; some on the side of muzzle, but not joined between the ears and eyes.

Score 3:

Wool cover over the top of head and on the side of muzzle; wool joined between the ears and eyes.

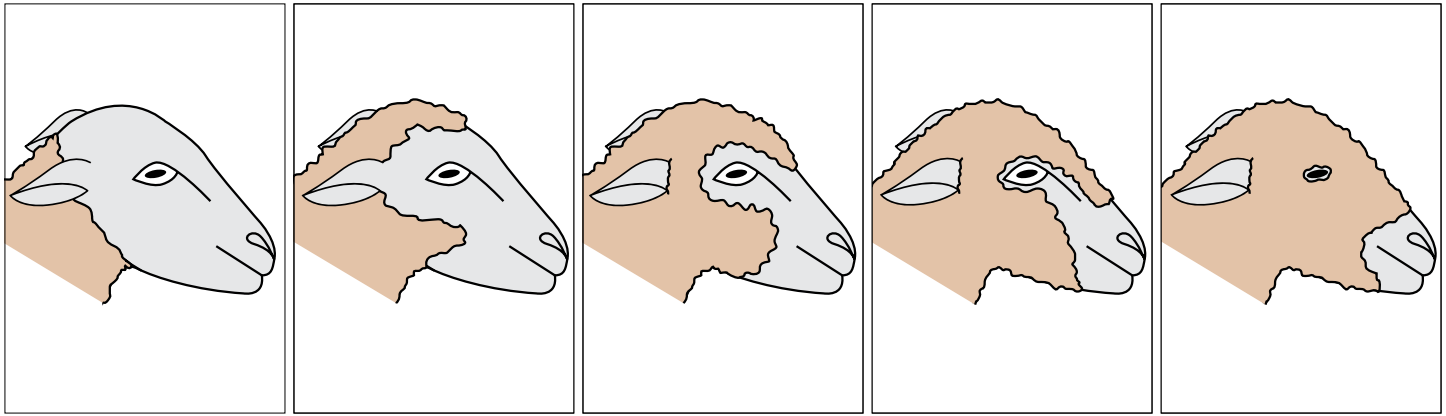
Score 4:

Wool cover from the top of the head down the muzzle; clear channel remains between the eye and the mouth.

Score 5:

Heavy wool growth over the entire face with the exception of the eyes, nose and mouth areas; wool from the top and side of the muzzle joining.

Face cover (FACE)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Jaw (JAW)

Age: Over 4 months.

When: Anytime.

Jaw refers to the soundness of jaw structure, in particular the alignment of the lower jaw and its teeth relative to the top jaw and its pad that the lower jaw teeth bite onto.

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

Rule of thumb: The upper and lower jaws of a Score 1 sheep line up squarely at the teeth i.e. teeth rest 'on the pad', whereas a Score 5 sheep has either a heavily 'undershot' jaw or heavily 'overshot' jaw.

Score 1:

Upper and lower jaws line up squarely at the teeth i.e. teeth rest 'on the pad'.

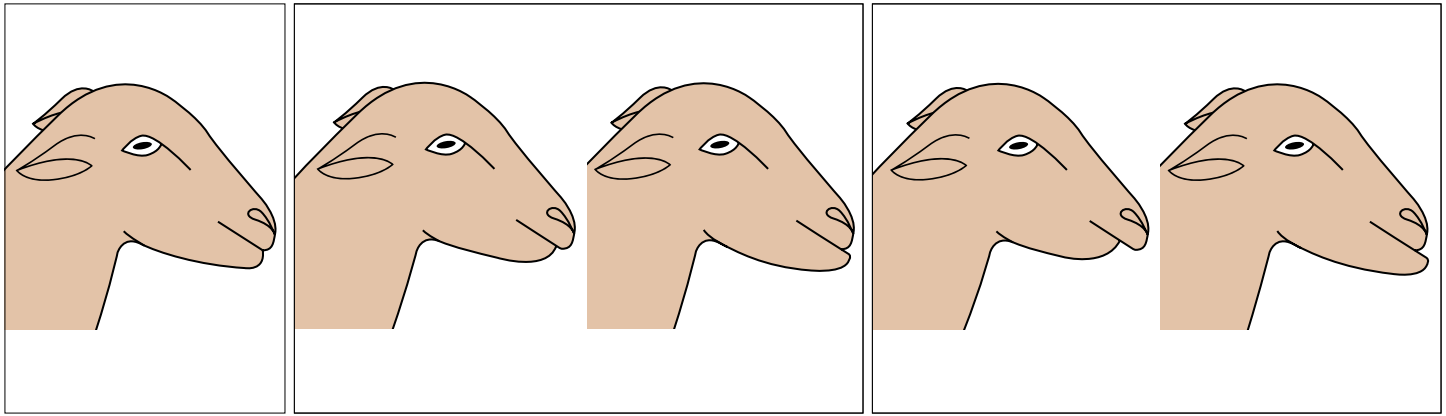
Score 3:

Jaw is marginally 'undershot' or 'overshot'; lower jaw is slightly shorter or longer than the upper jaw and as a result the teeth are either slightly behind or in front of the pad, i.e. at yearling age 1 to 3mm in front or behind the edge of the pad at the centre of the jaw.

Score 5:

Heavily 'undershot' or 'overshot' jaw; lower jaw is significantly shorter or longer than the upper jaw and as a result the teeth are either well behind or in front of the pad, i.e. at yearling age greater than 3mm in front of the edge of the pad at the centre of the jaw.

Jaw (JAW)



Score **1**	Score **3**	Score **5**

Legs/Feet (LEGS)

Age: Over 4 months.

When: Anytime.

Legs/Feet is a combined trait. It refers to the overall soundness of the front and back leg and feet structure, in particular the *orientation* of the legs/feet and *angulation* of the hocks and pasterns in relation to the feet.

How to score: A single score of 1, 2, 3, 4 or 5. The highest score across the leg and feet component of all four legs is recorded.

Rule of thumb: If the hocks and pasterns of the back legs and feet have moderate angulation (Score 1), but that pasterns of the front legs have extreme angulation (Score 5), then Score 5 is overall score recorded for the trait.

Score 1:

Straight legs that stand squarely on their feet; no distortion of the hoof shape; moderate angulation of hock and pastern.

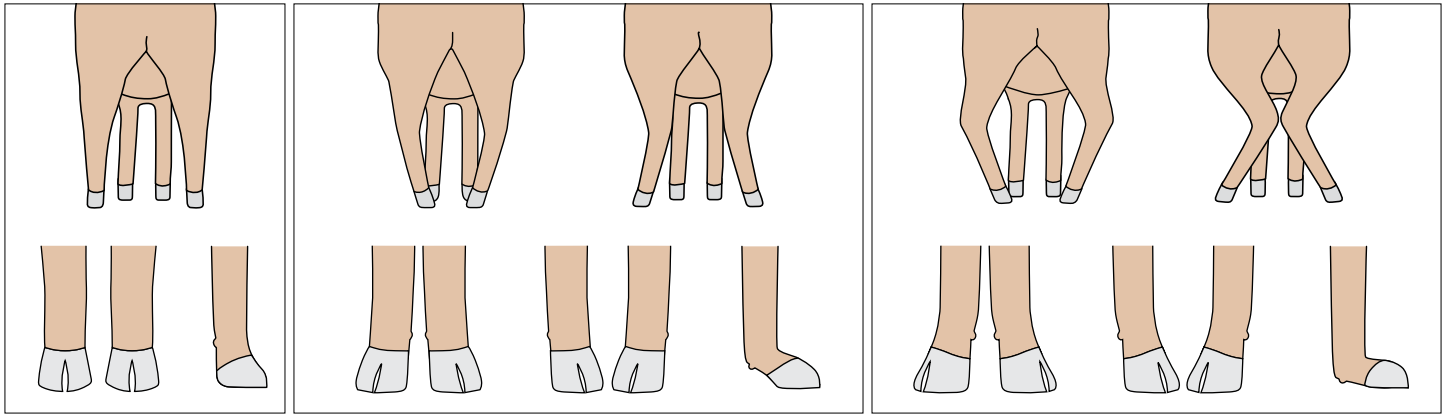
Score 3:

Significant hock angulation, and/or legs and feet orientating slightly inwards or outwards, and/or moderate distortion of the hoof shape, and/or significant, or small angulation of the pasterns.

Score 5:

Extreme hock angulation, and/or legs and feet orientating inwards with hocks touching or 'bowed' outwards, and/or extreme distortion of the hoof shape, and/or extreme, very small or no angulation of the pasterns.

Legs/Feet (LEGS)



Score **1**	Score **3**	Score **5**

Shoulder/Back (BACK)

Age: Over 4 months.

When: Within 1 month post shearing.

A combined trait, shoulder/back refers to the soundness of the shoulder blades and their positioning in relation to the neck and spine.

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

Rule of thumb: A sheep with Score 1 has angular shoulders and a straight back between the top of the shoulder blades and hips. A Score 5 sheep has shoulder blades that sit well above (or well below) the spine or an extremely 'dipped' backline.

Score 1:

Shoulder blades sit squarely either side of the spine i.e. no trough or ridge between the shoulders; back straight between shoulders and hips.

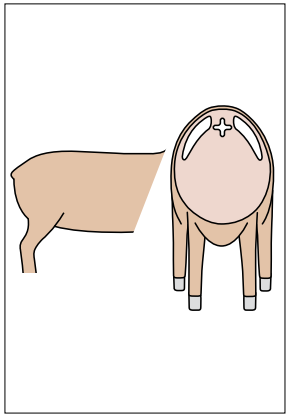
Score 3:

Shoulders positioned below the spine to create a 'ridge' or above the spine to create a 'trough' between the shoulder blades; back dips slightly behind the shoulders (relative to the shoulders and hips).

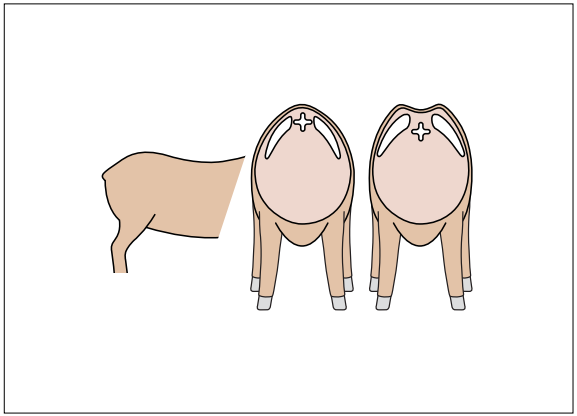
Score 5:

Extremely high and wide shoulder blades that create a deep 'trough' above the spine or extremely low and narrow shoulder blades that create a sharp 'ridge' above the spine and/or back dips severely behind the shoulders (relative to the shoulders and hips).

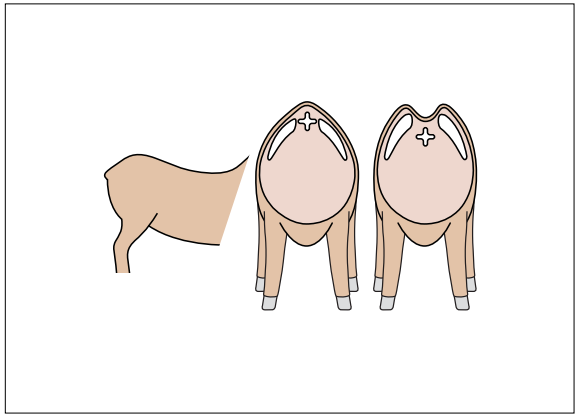
Shoulder/Back (BACK)



Score **1**



Score **3**



Score **5**

Body wrinkle (BDWR)

Age: Over 4 months.

When: Within 1 month post shearing.

Body wrinkle refers to the degree and quantity of wrinkle on the body.

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

Rule of thumb: A sheep with Score 1 has a plain body with no wrinkles. A Score 5 sheep has extensive wrinkles and heavy folds of skin over its entire body.

Score 1:

Plain-bodied sheep with no body wrinkle.

Score 2:

Plain-bodied sheep with a few small wrinkles over the body.

Score 3:

Slight wrinkling over the body.

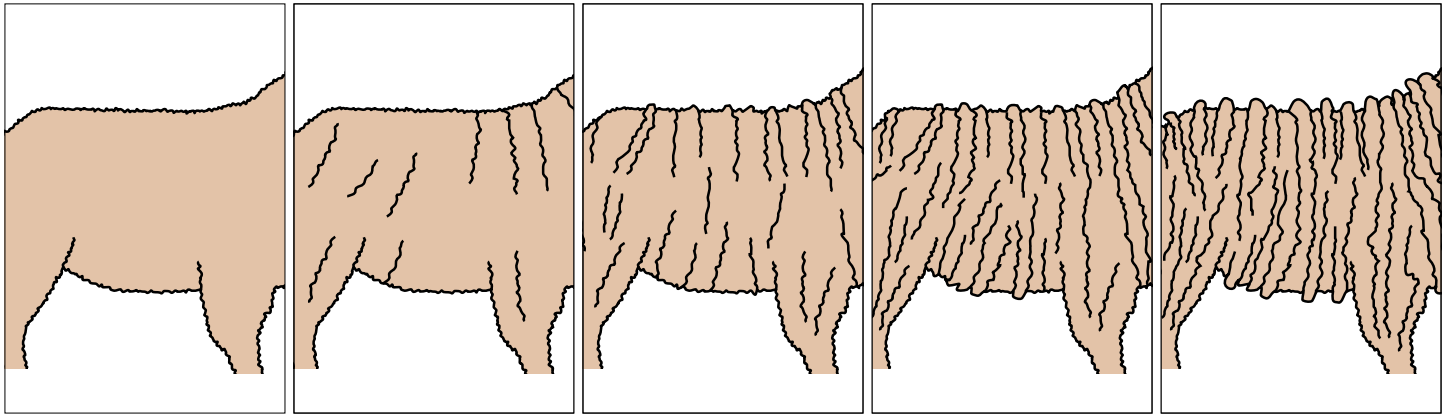
Score 4:

Heavy wrinkling over the body.

Score 5:

Very heavy wrinkling and heavy folds of skin over the body.

Body wrinkle (BDWR)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Using Visual Breech Scores

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

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

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 sheep 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 sheep (unmulesed only with the exception of Dag and Urine Stain which may be gathered on mulesed sheep) 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 sheep when scores are taken, recommended in the following table.

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

Trait	Age	When
Breech cover	• 6 to 10 weeks	• Lamb marking, preferably in the cradle
	• Over 4 months	• Within 1 month post shearing
Crutch cover	• Over 4 months	• Anytime
Breech wrinkle	• 6 to 10 weeks	• Lamb marking
	• Over 4 months	• Within 1 month post shearing
Dag	• Over 4 months	• Prior to crutching
Urine Stain	• Over 4 months	• Anytime, provided a minimum of 4 months of wool growth in breech area

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

Sheep Genetics
Tel: 02 6773 2948 Email: info@sheepgenetics.org.au
Web: www.sheepgenetics.org.au

Australian Merino Sire Evaluation Association
Tel: 02 6743 2306 Email: ben_swain@bigpond.com
Web: www.merinosuperiorsires.com.au

Breech cover – Lambs (BCOV)

Age: 6 to 10 weeks.

When: Lamb marking, preferably in the cradle.

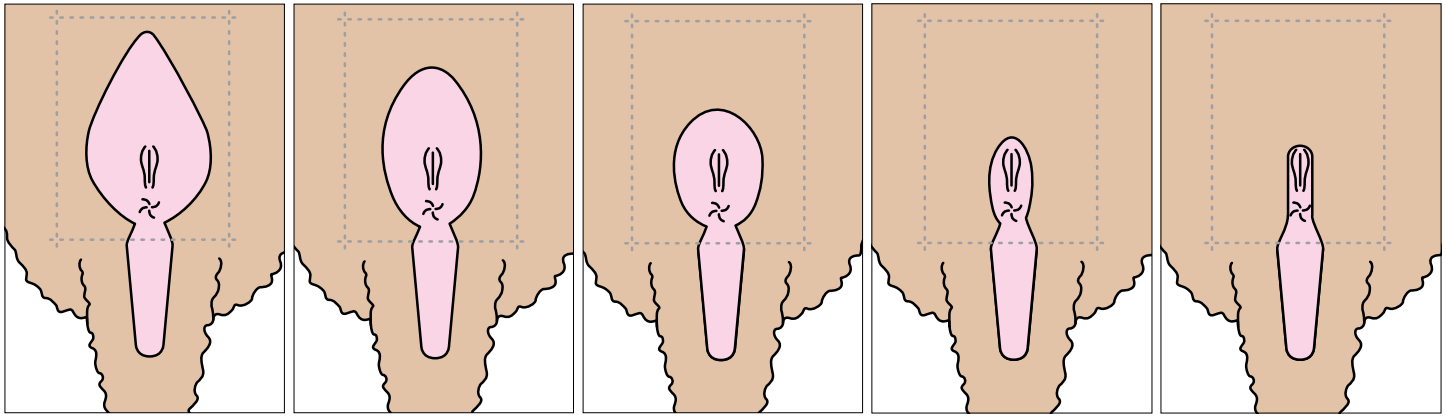
Breech cover score refers to the amount of natural bare skin around the perineum and breech area, in particular, the depth and width of bare skin below and surrounding the vulva or anus. It is important to consider the width and depth of the bare skin in combination when scoring breech cover. Some sheep have short 'fluffy' fibres growing on the bare skin at certain times of the year. This should be scored as bare skin. Males and females will also appear differently, with females often having a larger area of bare skin. All sheep should be scored as they are observed and not adjusted for sex.

Note: Only visual scores on unmulesed sheep (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 sheep has natural bare area that extends outwards around the anus and vulva, and right down to the bottom of the breech area (the channel). A sheep with Score 5 has complete (most) wool cover i.e. no natural bare area at all. If a sheep has natural bare area to the bottom on the breech area (Score 5), but is a very narrow natural bare area (Score 1), then the overall score should be adjusted back by 1 i.e. The overall score would be Score 4.

Breech cover – Lambs (BCOV)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Breech cover (BCOV)

Age: Over 4 months.

When: Within 1 month post shearing.

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. It is important to consider the width and depth of the bare skin in combination when scoring breech cover. Some sheep have short 'fluffy' fibres growing on the bare skin at certain times of the year. This should be scored as bare skin. Males and females will also appear differently, with females often having a larger area of bare skin. All sheep should be scored as they are observed and not adjusted for sex.

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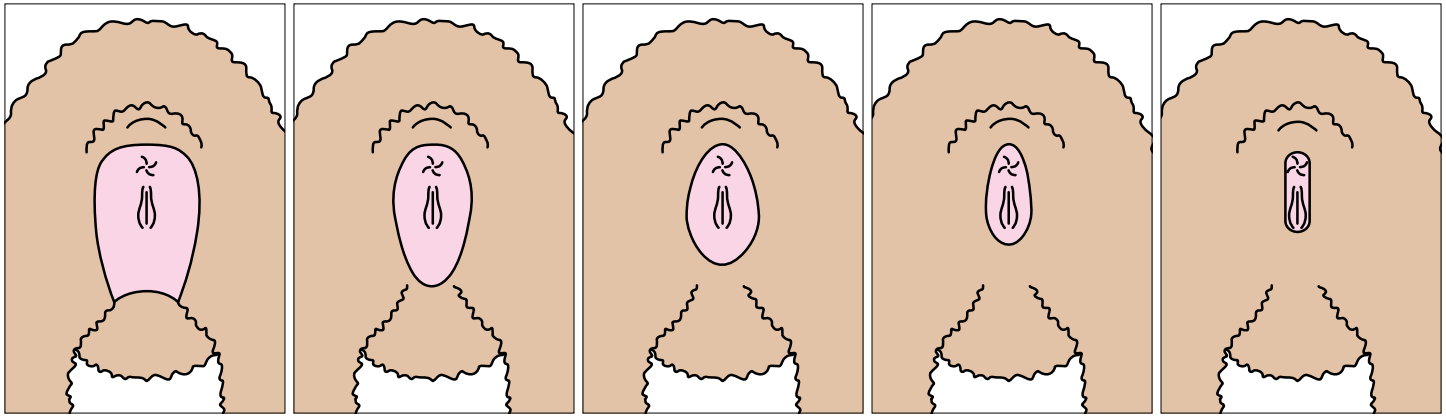
Breech cover (BCOV)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Crutch cover (CCOV)

Age: Over 4 months.

When: Anytime.

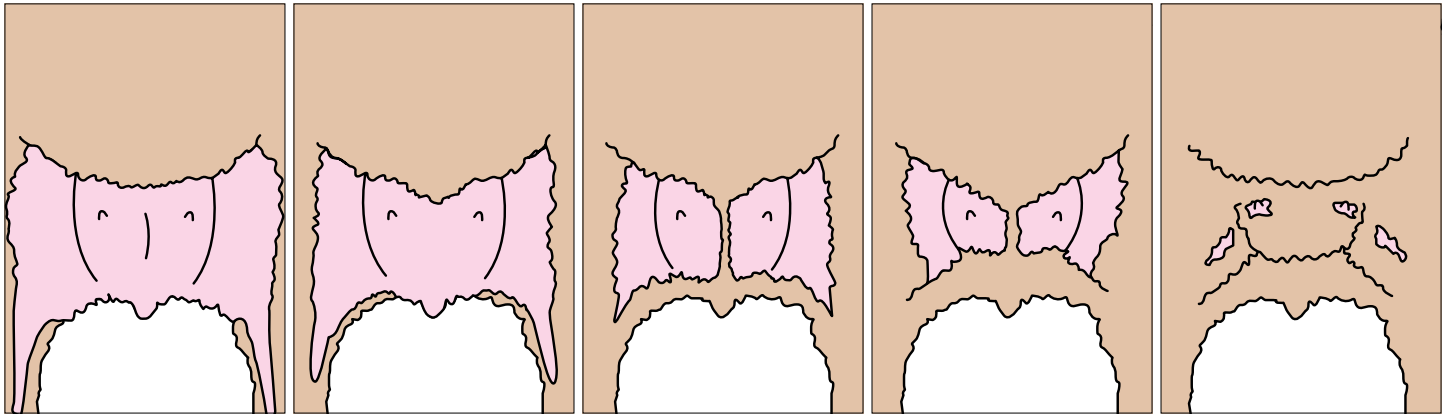
Crutch cover score refers to the amount of natural bare skin from which wool would normally be removed by the first blow during crutching, in particular, the pubic area, groin and inside back legs. Males and females will also appear differently, with females often having a larger area of bare skin. All sheep should be scored as they are observed and not adjusted for sex.

Note: Only visual scores on unmulesed sheep (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 sheep has natural bare area that extends completely throughout the pubic and groin region, and extends through to the sheep's breech, as well as right down the inside back legs beyond the hocks. A sheep with Score 5 has complete (most) wool cover i.e. no natural bare area at all.

Crutch cover (CCOV)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Breech wrinkle – Lambs (BRWR)

Age: 6 to 10 weeks.

When: Lamb marking.

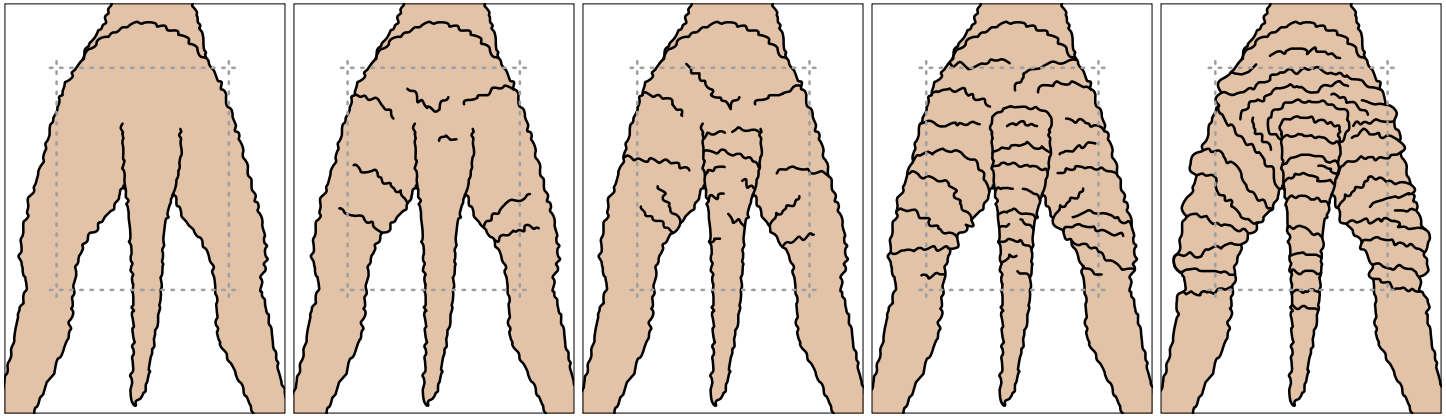
Breech wrinkle refers to the degree of wrinkle at the tail set, sides of the tail (bat wings), adjacent to the anus/vulva and down the hind legs.

Note: Only visual scores on unmulesed sheep (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: A sheep with Score 1 has no wrinkle. A Score 5 sheep has extensive wrinkle at the tail set, sides of the tail (bat wings), adjacent to the anus/vulva and down the hind legs.

Breech wrinkle – Lambs (BRWR)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Breech wrinkle (BRWR)

Age: Over 4 months.

When: Within 1 month post shearing.

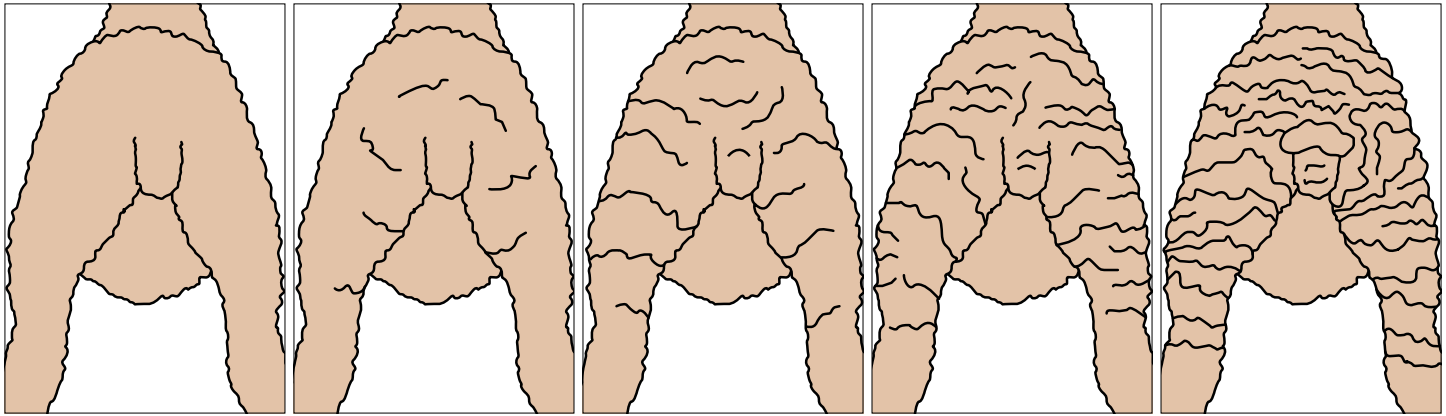
Breech wrinkle refers to the degree of wrinkle at the tail set, sides of the tail (bat wings), adjacent to the anus/vulva and down the hind legs.

Note: Only visual scores on unmulesed sheep (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: A sheep with Score 1 has no wrinkle. A Score 5 sheep has extensive wrinkle at the tail set, sides of the tail (bat wings), adjacent to the anus/vulva and down the hind legs.

Breech wrinkle (BRWR)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Dag (DAG)

Age: Over 4 months.

When: Prior to crutching; 60 days after the season break following a worm burden (when one exists,) or when 30 to 40 per cent of the flock is scouring.

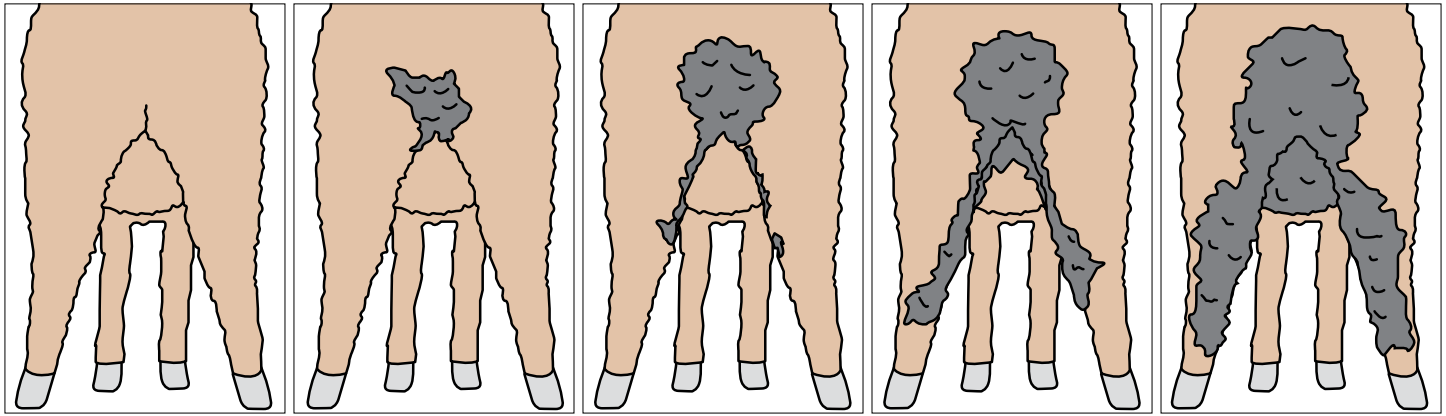
Dag formation is caused by the adhesion of faecal material to the breech area. Dag scores refer to the quantity of faecal material adhering to the wool surrounding the breech and extending down the hind legs.

Note: Visual scores on mulesed sheep can be submitted to Sheep Genetics. It is essential to record the mulesing status of the sheep when scores are taken.

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

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

Dag (DAG)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Urine Stain (URINE)

Age: Over 4 months.

Sex: Ewe.

When: Anytime, provided a minimum of 4 months of wool growth in breech area.

Urine stain is caused by the absorption of urine in the breech wool.

Urine stain scores refer to the area of breech wool, including the wool on the hind legs and tail that is clearly stained by urine. Diagrams only show the variation in stain on the leg however stain on the tail, when present, should also be accounted for.

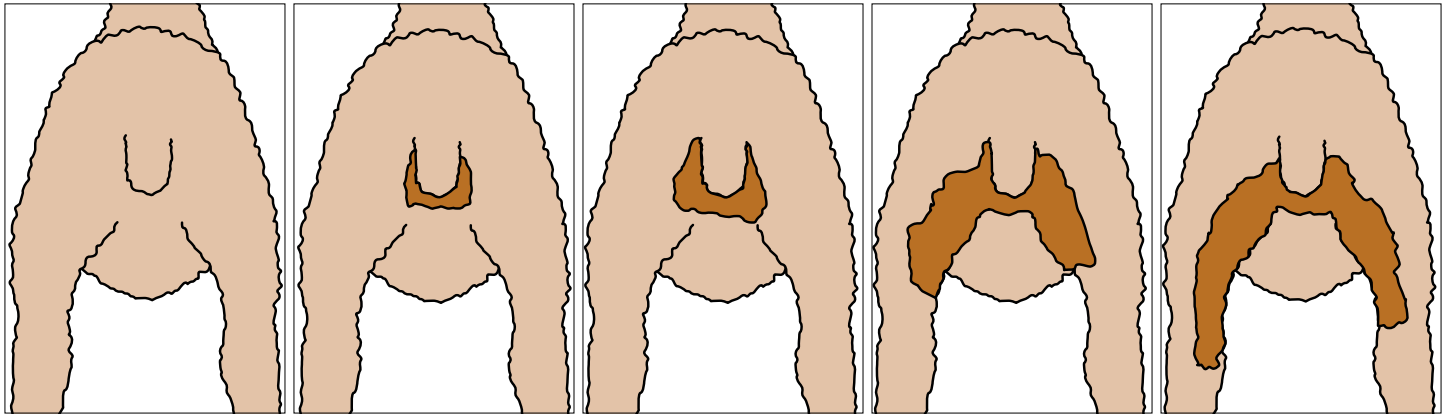
When scoring urine stain, the sweaty fribs that some ewes can have around the vulva should not be included.

Note: Visual scores on mulesed ewes can be submitted to Sheep Genetics. It is essential to record the mulesing status of the ewe when scores are taken.

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

Rule of thumb: A ewe with Score 1 has no urine stain. A Score 5 ewe has extensive urine stain in the breech area and extending down the hind legs. If a ewe has urine stain extending further down one leg than the other, than the leg with the greater extent of urine stain is scored.

Urine Stain (URINE)



Score **1**	Score **2**	Score **3**	Score **4**	Score **5**

Classer's Grade (GRADE)

Age: Over 6 months.

When: Anytime, provided a minimum of 5 months of wool growth.

Classer's Grade describes the overall standard of the sheep for both visual and measured performance relative to the flock's breeding objective.

How to score: The sheep should be assessed in a classing race or box that allows good access and ability to clearly observe each sheep as an individual.

Rule of thumb: A sheep with Score 1 is a TOP and is in the top 10-30% of the group. A Score 5 sheep is a CULL and is in the bottom 10-30% of the group.

Score 1:

TOP
Sheep is in the top 10-30% of the sheep in the group.

Score 3:

FLOCK
Sheep is in the middle 40-80% of the sheep in the group.

Score 5:

CULL
Sheep is in the bottom 10-30% of the sheep in the group.

Stage Code

The following Stage Codes should be used when submitting data to Sheep Genetics.

Name	Code	Age*
Birth	B	Birth to 24 hours
Weaning	W	42-120 days (7-16 weeks)
Early post weaning	E	120-210 days (4-7 months)
Post weaning	P	210-300 days (7-10 months)
Yearling	Y	300-400 days (10-13 months)
Hogget	H	400-540 days (13-18 months)
Adult	A	540 days or older (18 months or older)

* The average age of the sheep in the management group.

Acknowledgements

This guide was originally produced and then updated with the assistance of many sheep breeders and sheep industry research and management specialists, in particular, members of the Executive Committee of the Australian Merino Sire Evaluation Association.

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