

# South Australia Merino Sire Evaluation Site Report

Within-Site Results  
November 2018

2017 Drop  
Hogget Assessment

Conducted by  
South Australian Merino Sire Evaluation Trial Committee

Under the auspices of



With support from



## **Disclaimer**

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The Australian Merino Sire Evaluation Association has approved the format used in this report.

### South Australia Merino Sire Evaluation

The South Australian Merino Sire Evaluation Trial (SAMSET) was established in 2017 at Keyneton Station, in the eastern Mount Lofty Ranges. Keyneton Station importantly offered to be the host site for the first Merino Sire Evaluation Trial in SA, to be run on a commercial property.

There was significant interest in the site from both SA and interstate ram breeders, with the quality of rams entered of very high calibre. This will make an important contribution to genetic improvement for the South Australian merino industry.

Supported by Merino SA, the trial is an accredited sire evaluation site run under the rigorous design, recording and data evaluation protocols of the Australian Merino Sire Evaluation Association (AMSEA). AMSEA trials provide the opportunity for objective comparisons to be made between rams from different studs by evaluating their progeny for sheep type, structure, wool production and carcass traits. The progeny are all run together in the same environmental conditions that typify SA Merino production, with all male progeny marked.

As a non-profit site, our sponsors provide a very important contribution, and we would like to acknowledge their generous support of the SA Merino Sire Evaluation Site. We would also like to thank those individuals and/or businesses, including Merino SA and many industry service providers, whom have volunteered their time, service and/or product in helping the site run as smoothly as possible throughout the year.

Roger Fiebig  
Chairman  
South Australia Site Committee

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## 2017 Drop Hogget Assessment

The information in this Site Report provides an update of the assessment of the 2017 drop, including the Hogget assessments of the sire's progeny performance for measured and visually assessed traits.

The Yearling wool and visual assessments were made at 12 months of age with 8 months of wool growth with the Hogget wool assessments completed at 16 months of age with 12 months of wool growth.

### Site Committee

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## 2017 Drop Owner and Contact Details

Breeders flock, Sire name Sire ID #, Breed †	Contact Details
<b>Collinsville Poll, 135111</b> 600105-2013-135111, Poll Merino	<b>George Millington</b> PO Box 26, Hallett SA 5419 M: 0417 87 9218, E: george@collinsville.com.au
<b>Flairdale Poll, 150078 (Link)</b> 600015-2015-150078, Poll Merino	<b>Wayne &amp; Matt Lehmann</b> PO Box 323, Tailem Bend SA 5260 P: (08) 8598 7006, M: 0408 89 6877, E: flairdale@internode.on.net
<b>Greenfields Poll, 140345 (Link)</b> 600240-2014-140345, Poll Merino	<b>James Sullivan</b> PMB 14, Hallett SA 5419 P: (08) 8894 2097, M: 0427 94 2097, E: james@greenfieldsstud.com.au
<b>Gunallo Poll, 140007</b> 600880-2014-140007, Poll Merino	<b>Brad &amp; Ray Schroeder</b> PO Box 59, Pinnaroo SA 5304 P: (08) 8577 8485, M: 0427 77 8485, E: ray@gunallo.com.au
<b>Hamilton Run Poll, 150600</b> 600840-2015-150600, Poll Merino	<b>Greg Andrews</b> 210 Murchland Dr, Jamestown SA 5491 P: (08) 8664 0950, M: 0428 16 1746, E: hamiltonrun@bigpond.com
<b>Hazeldean, 13.4936 (Link)</b> 500383-2013-004936, Merino	<b>Jim Litchfield</b> Hazeldean Pty Ltd, Cooma NSW 2630 P: (02) 6453 5555, M: 0417 67 6561, E: admin@hazeldean.com.au
<b>Hilton Heath Poll, 14Y447</b> 600781-2014-14Y447, Poll Merino	<b>Matthew Fiebig</b> 8524-8644 Ngarkat Highway, Keith SA 5267 P: (08) 8754 2096, E: mlfiebig@activ8.net.au
<b>Kelvale Poll, 150120</b> 600416-2015-150120, Poll Merino	<b>Stephen Kellock</b> PO Box 304, Keith SA 5267 P: (08) 8755 1761, M: 0427 43 8138, E: admin@kelvalespollmerinos.com.au
<b>Leahcim Poll, 152775</b> 600815-2015-152775, Poll Merino	<b>Andrew and Rosemary Michael</b> PO Box 31, Snowtown SA 5520 P: (08) 8865 2085, M: 0418 82 8431, E: leahcimgenetics@bigpond.com
<b>Malleetech Poll, 155180</b> 609533-2015-155180, Poll Merino	<b>David Smith</b> 976 Geranium South Road, Geranium SA 5301 P: (08) 8577 2216, M: 0427 58 7722, E: david@malleetech.com
<b>Mumblebone, 130850 (Link)</b> 500063-2013-130850, Merino	<b>Chad Taylor</b> Marapana, 456 Wuuluman Road, Wellington NSW 2820 P: (02) 6845 3620, M: 0458 45 3608, E: chad@mumblebone.com.au
<b>Pepper Well Poll, 155227</b> 601351-2015-005227, Poll Merino	<b>Hansi Graetz</b> PO Box 3, Keyneton SA 5353 P: (08) 8564 8337, M: 0427 79 0676, E: pepperwell1@gmail.com
<b>Poll Boonoke, 150026</b> 600001-2015-150026, Poll Merino	<b>Angus Munro</b> Boonoke, Conargo Road, Denliquin NSW 2710 P: (03) 5884 6604, M: 0488 60 1603, E: amunro@austfood.com.au
<b>Ridgway Advance Poll, 150103</b> 601307-2015-150103, Poll Merino	<b>Darren O'Brien</b> PO Box 62, Kyancutta SA 5651 P: (08) 8681 2019, M: 0419 77 2173, E: dobandjodie@activ8.net.au
<b>Ridgway Poll, 140721 (Link)</b> 601116-2014-140721, Poll Merino	<b>Brad &amp; Ray Schroeder</b> PO Box 59, Pinnaroo SA 5304 P: (08) 8577 8485, M: 0427 77 8485, E: ray@gunallo.com.au
<b>Roemahkita Poll, 150092</b> 601127-2015-150092, Poll Merino	<b>Mark Kerin</b> GullenGamble, Yeoval NSW 2868 P: (02) 6846 4252, M: 0427 46 4252, E: gullen@bordernet.com.au

**(Link)** Sire evaluated to provide links between years and sites so that the all site results can be combined into a single report, eg, *Merino Superior Sires*.

**(Unreg)** Sire bred in an unregistered flock.

† Breed of flock in which the sire was born

# The 16 digit Sire ID is a unique number for all sheep.  
 - 2 for the breed of the flock, e.g. Merino (50), Poll Merino (60), Dohne (51)  
 - 4 for flock code, AASMB Registered flock code or unregistered code.  
 - 4 for year of drop & 6 for tag# used in the breeder's records.

### Host Property and Ewe Base

Keyneton Station, Keyneton are the inaugural host of the 2017 cohort for the SA site. Keyneton Station is located in the eastern Mount Lofty Ranges and receives an average 500mm in a winter dominant pattern. The Keyneton Station ewes are 65-70kg and produce 19-20 micron wool. The ewes mated for the 2017 trial were sourced from primarily 2½ year old age group and were classed prior to joining to ensure an even line.

### 2017 Drop Summary

The site evaluated 15 rams and 1 funded link sire in 2017. 60 ewes were joined to each sire via AI on 19<sup>th</sup> and 20<sup>th</sup> January 2017. At day 45, 610 ewes (from AI) were scanned as pregnant, representing the number of AI lambs. This gave a rate of 63.5% conception from the AI. There were no significant differences between the 16 different sires, nor the day of insemination. The break to the season was late at Keyneton, occurring mid-June 2017. As a result, the ewes were fed in a containment lot through mid to late pregnancy in Autumn. In mid-May the ewes were divided into twin and single mobs. Both mobs were placed on improved perennial pastures. The twin mob continued to have access to self feeders leading up to and through lambing. When the break finally occurred in mid-June, the conditions were cold resulting in slow pasture growth.

The first cohort of lambs born from 16 rams occurred in June 2017. Lamb marking took place on the 24<sup>th</sup> July 2017 with visual traits fibre pigmentation, non-fibre pigmentation, recessive black, random spot, breech cover and breech wrinkle, recorded. Sire pedigree was established by DNA testing. There were 553 progeny generated across the 16 rams.

At 10 weeks of age the lambs were weaned. Lambs were drenched and weaned on to vetch and oat pastures, and were tip shorn 5<sup>th</sup> October 2017 to reduce potential grass seed issues. Seasonal conditions continued to be tough with a short spring and very little summer rainfall. As a result, lambs were fed beans through self feeders from January through to May 2018.

On May 28<sup>th</sup> 2018, major phenotyping was recorded on the 2017 drop progeny including:

- Mid-side fleece sampling: yield, fibre diameter, fibre diameter coefficient of variation, fibre diameter standard deviation, curvature, comfort, staple strength and staple length.
- Visual classing: fleece rot, wool colour, wool character, dust penetration, staple structure, face cover, jaw, legs/feet, dag, and selection grade.
- Carcase scanning: body weight, fat, and eye muscle depth.

Shearing was undertaken on 24<sup>th</sup> September 2018 along with another mid-side sampling. This completed the suite of wool measurements and visual assessments on the 2017 drop including:

- Mid-side fleece sampling: yield, fibre diameter, fibre diameter coefficient of variation, fibre diameter standard deviation, curvature and comfort.
- Collection of greasy and clean fleece weights.
- Post shearing visual classing: shoulder/back and body wrinkle.

Worm Egg Count was not collected on the 2017 drop progeny as the average worm egg count did not go above the testing threshold of 300 eggs per gram.

Joe Keynes  
Keyneton Station,  
Keyneton, South Australia

## Assessment and Management Program

Activity	Date/s	Age	Wool
Selection of ewes	December 2016		
Allocation of ewes for mating	19 & 20 January		
Pregnancy scanning	3 March 2017		
Allocated to lambing paddocks	30 May 2017		
Lambing: start – finish	12 – 19 June 2017		
Lambing mobs boxed to one management group	15 August 2017		
Tagging, pigmentation and breech scoring	24 July 2017	39 days	
Marking	24 July 2017	39 days	
Weaning	5 September 2017	82 days	
Even up Shearing	5 October 2017	112 days	
Mid side fleece sampling (Y)	28 May 2018	12 months	8 months
Mid side fleece sampling (H)	24 September 2018	16 months	12 months
Visual trait scoring (Y)	28 May 2018	12 months	8 months
Shearing (H)	24 September 2018	16 months	12 months
Fat and eye muscle scanning (H)	28 May 2018	12 months	8 months
Worm egg count	WEC not measured		
Body Weight (W)	5 September 2017	3 months	
Body Weight (P)	28 May 2018	12 months	
Body Weight (H)	24 September 2018	16 months	
Drench	5 September 2017 & 21 January 2018		
Fly treatment	Progeny are mulesed.		
Supplementary Feeding	Lambs were fed beans through self feeders from January through to May 2018 and again through July 2018		
Field day or public display	22nd of June 2018		



## Visual Trait Assessment and Site Breeding Objective

### Visual trait assessment

Classer's Grade: Bill Walker

Trait Scores: Bill Walker/ Michelle Cousins

### Site Breeding Objective used to assess the Visual Classer's Grades

The Breeding Objective used by the classer/s when selecting the Classers Tops, Flock and Cull grades is described below. The Breeding Objective for both measured and visual assessed traits was developed by the site committee in consultation with the classer prior to the grading.

#### Breeding Objective

Rams will be capable of producing progeny with 18-21 micron fleece at 12 months with at least 4kg of wool from 8 months growth from an easy-care plain bodied sheep. In addition, progeny should be capable of achieving 22-25kg carcass weight at 10-12 months of age. Ewe progeny will be fertile and capable of high natural conception rates when first mated at 18 months.

In regard to Classer's Visual Grades the expectation is at the start of grading that there will be a ratio of 10-30% Top, 40-80% Flock and 10-30% Cull. However, the sheep performance relative to the above breeding objective determines the final proportion allocated to each grade.

## Sire Codes and Pedigrees

Sire Code	Breeders flock, Sire number	Sheep Genetics ID	Sire of Sire
1	Collinsville Poll, 135111	600105-2013-135111	600105-2009-090771 (Collinsville Poll, 090771)
2	Flairdale Poll, 150078 (Link)	600015-2015-150078	600105-2013-130242 (Collinsville Poll, 130242)
3	Greenfields Poll, 140345 (Link)	600240-2014-140345	600240-2012-120201 (Greenfields Poll, 120201)
4	Gunallo Poll, 140007	600880-2014-140007	600880-2012-120008 (Gunallo Poll, 120008)
5	Hamilton Run Poll, 150600	600840-2015-150600	601244-2013-130219 (Kamora Park Poll, 130219)
6	Hazeldean, 13.4936 (Link)	500383-2013-004936	500383-2011-003542 (Hazeldean, 11.3542 (Hugh))
7	Hilton Heath Poll, 14Y447	600781-2014-14Y447	600065-2007-07L015 (Nyowee Poll, 07L015)
8	Kelvale Poll, 150120	600416-2015-150120	600416-2012-120200 (Kelvale Poll 120200)
9	Leahcim Poll, 152775	600815-2015-152775	600815-2012-122899 (Leahcim Poll, 122899)
10	Malleetech Poll, 155180	609533-2015-155180	600571-2013-130087 (Billandri Poll, 130087)
11	Mumblebone, 130850 (Link)	500063-2013-130850	500063-2010-100186 (Mumblebone, 100186)
12	Pepper Well Poll, 155227	601351-2015-005227	601351-2013-003099 (Pepper Well Poll, 003099)
13	Poll Boonoke, 150026	600001-2015-150026	600001-2013-130028 (Poll Boonoke, 130028)
14	Ridgway Advance Poll, 150103	601307-2015-150103	601307-2013-130082 (Ridgway Advance Poll, 130082)
15	Ridgway Poll, 140721 (Link)	601116-2014-140721	600815-2010-100858 (Leahcim Poll, 100858)
16	Roemahkita Poll, 150092	601127-2015-150092	600105-2013-130242 (Collinsville Poll, 130242)

## Explaining the Different Types of Results Reported

**Raw Data** » **Adjusted Sire Means** » **Flock Breeding Values.**

Merino Sire Evaluation produces a variety of result types which are all connected. The types of data produced include **Raw Data**, **Adjusted Sire Means**, **Flock Breeding Values** and **Indexes**. Initial measurements taken during sire evaluation assessments are used as the first level of results (Raw Data), then adjustments are made to increase the selection accuracy and better enable the comparison of results and sires (Adjusted Sire Means and Flock Breeding Values and Indexes).

Where possible, AMSEA publishes **Adjusted Sire Means**, **Flock Breeding Values** and **Indexes** in Site Reports as they offer a higher level of accuracy. Visual Traits are reported as **Raw Data**; this is because Adjusted Sire Means and Flock Breeding Values are not currently available for those traits.

### Raw Data

Raw data is unadjusted results as measured in the yard, paddock or wool testing facility.

### Adjusted Sire Means

These are raw data results that have been adjusted for the effect of sex, birth type/rear type, age of dam, dam source, age at measurement and management group.

### Flock Breeding Values (FBVs)

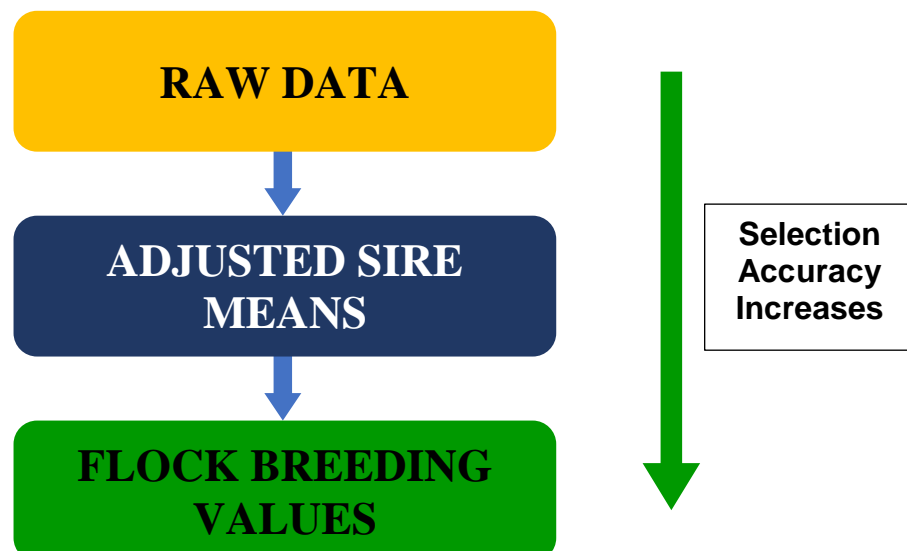
These results have been adjusted in the same way as Adjusted Sire Means, then further calculations have also been made to account for the level of heritability of a trait (some are more heritable than others), correlations between traits and the number of progeny a sire has.

FBVs are within site and within drop. As such they do not include data from other sources as is the case with Australian Sheep Breeding Values (ASBVs), which are reported in Merino Superior Sires.

### Indexes

A breeding index is the combination of breeding values into a single value that reflects a certain emphasis on those traits.

For more information about each Index see the page in this report titled 'Index Options'.



**Table 1. Adjusted Sire Means for Measured Traits**

**Adjusted Sire Means** are the average performance of all the progeny of a sire adjusted for all available information on sex, birth type, rear type, age of dam, age of measurement and management group, in order to improve the accuracy. No account is made for trait heritability and genetic correlations between traits that can improve the breeding value accuracy, as is the case in Tables 2, 3 and 4.

The highest performing sires for each trait (trait leaders) are highlighted by shading. The **Progeny group average** listed at the bottom of the table is the actual mean of the progeny group which includes both ewes and wethers.

Sire Code	Breeders flock, Sire name	Number of Progeny	Adjusted Sire Means										
			GFW	CFW	FD	FDCV	SL	SS	WT			FAT	EMD
			kg H^	kg H	µm H	% H	mm Y	N/ktex Y	W	Y	H	mm Y	mm Y
1	Collinsville Poll, 135111	34	4.4	2.7	15.8	19.6	59.0	26.6	24.7	32.7	49.6	2.2	21.8
2	Flairdale Poll, 150078	29	3.9	2.4	15.4	19.0	58.6	37.9	24.4	30.3	44.2	2.0	21.2
3	Greenfields Poll, 140345	23	3.8	2.3	15.7	19.0	57.1	37.5	24.8	29.5	45.4	2.3	22.9
4	Gunallo Poll, 140007	42	3.7	2.3	15.4	19.3	58.7	28.7	24.6	31.2	46.8	2.2	21.3
5	Hamilton Run Poll, 150600	36	4.2	2.5	16.4	20.0	61.3	29.5	25.1	32.6	49.0	2.3	21.9
6	Hazeldean, 13.4936	29	4.4	2.8	15.1	19.4	60.7	32.2	24.5	30.5	46.3	2.1	22.0
7	Hilton Heath Poll, 14Y447	40	4.2	2.6	15.9	20.0	59.2	33.2	24.8	32.6	50.7	2.2	22.0
8	Kelvale Poll, 150120	47	4.1	2.5	16.0	19.0	65.0	32.4	25.2	32.4	48.7	2.2	22.5
9	Leahcim Poll, 152775	36	4.0	2.4	15.5	18.0	58.8	30.7	25.8	33.3	50.6	2.2	22.2
10	Malleetech Poll, 155180	35	4.4	2.6	16.0	19.1	64.9	38.8	26.1	31.8	48.7	2.3	21.8
11	Mumblebone, 130850	36	4.3	2.6	16.1	17.9	65.8	32.4	24.8	32.9	49.5	2.4	23.0
12	Pepper Well Poll, 155227	36	3.7	2.2	16.4	19.1	61.4	29.6	23.6	32.8	49.3	2.3	22.9
13	Poll Boonoke, 150026	33	4.0	2.4	15.8	20.0	58.7	29.0	25.9	32.4	49.9	2.2	21.3
14	Ridgway Advance Poll, 150103	24	4.5	2.8	16.1	18.4	64.8	29.6	25.3	35.0	51.7	2.3	22.8
15	Ridgway Poll, 140721	40	4.1	2.6	15.7	18.2	61.3	31.6	25.7	32.9	49.3	2.1	21.1
16	Roemahkita Poll, 150092	33	3.8	2.3	15.5	19.6	55.9	37.1	24.7	30.8	46.3	2.0	21.4
	<b>Progeny group average</b>	<b>35</b>	<b>4.1</b>	<b>2.5</b>	<b>15.8</b>	<b>19.1</b>	<b>60.7</b>	<b>32.3</b>	<b>25.0</b>	<b>32.1</b>	<b>48.5</b>	<b>2.2</b>	<b>22.0</b>
			kg	kg	µm	%	mm	N/ktex	kg			mm	mm

^ W = Weaning (42 to 120 days); P = Post Weaning (210 to 300 days); Y = Yearling (300 to 400 days); H = Hogget (400 to 540 days); A = Adult (540 days and older)

## Index Options

A breeding index combines multiple Flock Breeding Values into a single value that reflects a certain emphasis on these traits. It is important that you use an index that best matches the breeding objective and production system of the flock you are selecting for.

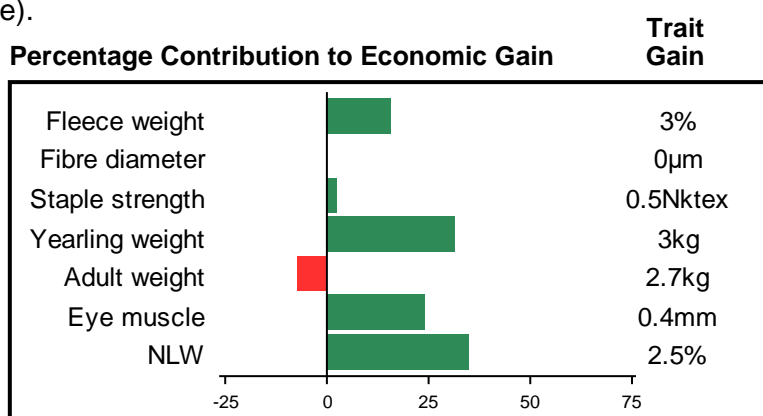
It is recommended that the performance of individual Flock Breeding Values and visually assessed traits is used in conjunction with an index as selection indexes assist in making balanced selection decisions.

The indexes on the following page are the DP+; MP+; FP+ and WP+. The first 3 of these indexes are the same as MERINOSELECT indexes of that name but account for the fact that direct reproduction records have not yet been recorded on the progeny. The WP+ index is unique to AMSEA.

Charts shown display the percentage contribution that each trait makes to economic gain in a commercial flock that uses an index for sire selection. Additionally, included for each index are the likely within-flock responses from using an index for 10 years. These responses are based on a ram breeding flock with a standard breeding program, no introduction of outside genetics and applying 35% of their selection emphasis on traits that are not in the index (such as visually assessed performance).

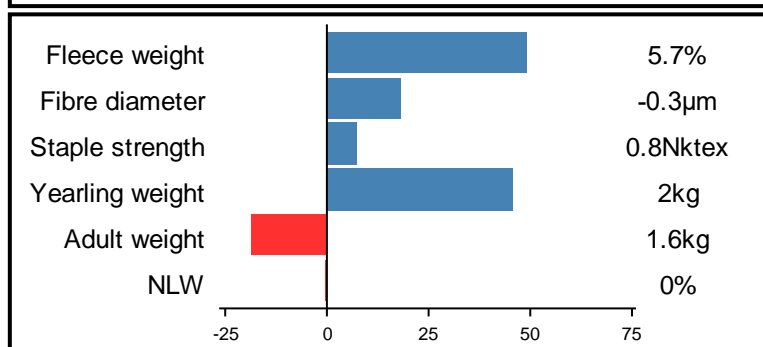
### Dual Purpose Plus (DP+)

Based on a meat focused production system where surplus progeny are sold as lambs and a portion of ewes are joined to terminal sires. Large increase in body weight and carcass traits. Moderate increase in fleece weight. Maintain fibre diameter and staple strength. Moderate increase in reproduction.



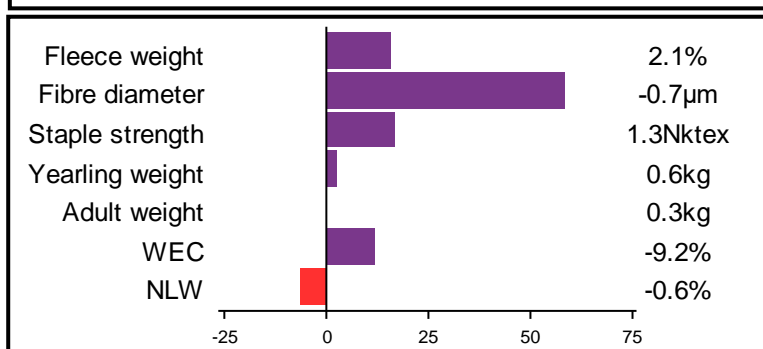
### Merino Production Plus (MP+)

Based on a balanced wool and meat production system where surplus progeny are sold as hoggets. Balanced emphasis on increasing fleece weight and reduction in fibre diameter. Moderate increase in body weight, with little change in reproduction.



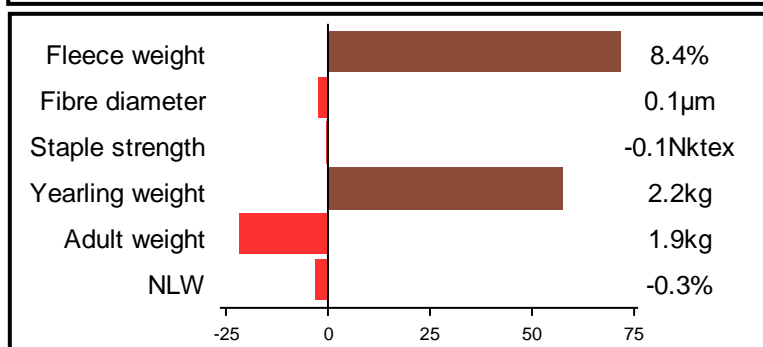
### Fibre Production Plus (FP+)

Based on a wool production system where wethers are retained, operating in an environment where worms cause economic losses. Large reduction in fibre diameter. Moderate increase in staple strength. Small reduction in WEC (if measured in the breeding program). Small increase in fleece weight. Little change in body weight and reproduction.



### Wool Production Plus (WP+)

Based on the MP+ production system with a greater emphasis on increasing fleece weight, while maintaining fibre diameter and a moderate emphasis on increasing body weight.



**Table 2. AMSEA Index Values and Classer's Visual Grade**

The index values reported are based on measured traits FBV performance with varying emphasis on fleece weight, fibre diameter, body weight, staple strength and worm egg count. See 'Index Options' (page 12) for more information on the indexes presented in the table below.

The highest performing sires for each trait (trait leaders) are highlighted by shading. Each sire is listed for Classer's Visual Grade and the same four indexes are reported at all site evaluations.

Sire Code	Breeders flock, Sire name	Number of progeny	AMSEA Index Values				Classer's Visual Grade <sup>1</sup>	
			Dual Purpose Plus	Merino Production Plus	Fibre Production Plus	Wool Production Plus	Tops % Y <sup>^</sup>	Culls % Y
1	Collinsville Poll, 135111	34	106	108	101	116	-7	-11
2	Flairdale Poll, 150078	29	75	98	108	88	-2	-4
3	Greenfields Poll, 140345	23	97	89	101	80	-5	18
4	Gunallo Poll, 140007	42	67	78	85	76	0	8
5	Hamilton Run Poll, 150600	36	93	85	82	96	-10	-4
6	Hazeldean, 13.4936	29	103	120	122	116	-7	3
7	Hilton Heath Poll, 14Y447	40	114	114	107	116	-4	10
8	Kelvale Poll, 150120	47	111	100	98	102	9	-3
9	Leahcim Poll, 152775	36	112	105	103	102	13	-10
10	Malleetech Poll, 155180	35	108	118	118	114	-11	8
11	Mumblebone, 130850	36	118	100	97	105	18	-18
12	Pepper Well Poll, 155227	36	98	65	67	71	-5	-7
13	Poll Boonoke, 150026	33	83	88	86	93	-13	17
14	Ridgway Advance Poll, 150103	24	136	123	109	130	21	-6
15	Ridgway Poll, 140721	40	93	109	107	108	10	-11
16	Roemahkita Poll, 150092	33	84	98	107	86	-7	10
	<b>Average performance</b>	<b>35</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>16</b>	<b>35</b>

<sup>^</sup> W = Weaning (42 to 120 days); P = Post Weaning (210 to 300 days); Y = Yearling (300 to 400 days); H = Hogget (400 to 540 days); A = Adult (540 days and older)

<sup>1</sup> Classer's Visual Grade is expressed as the percentage deviation of average Tops% and Culls%.

Sire codes listed in the Tables are used to locate sire performance in the following figures.

Figure 1a. Combined measured traits (DP+ index) and combined visually assessed traits for the site objective.

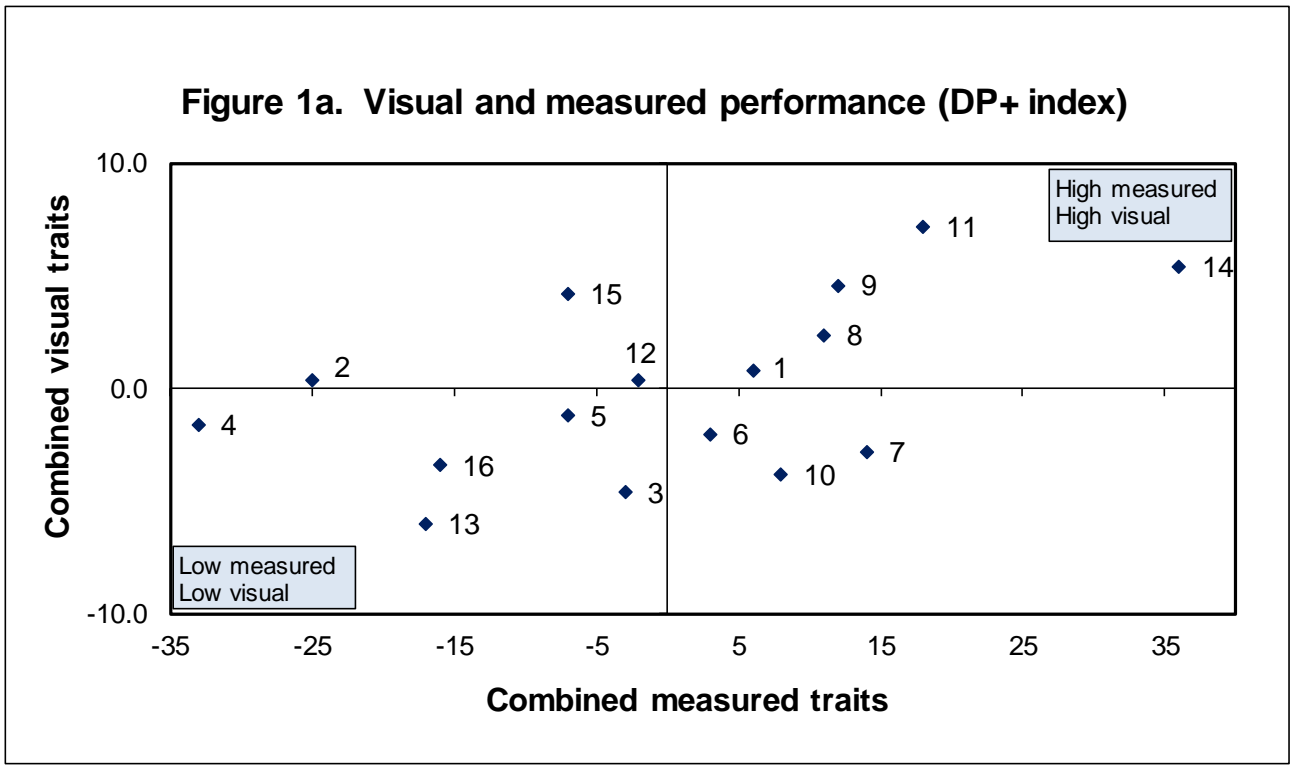


Figure 1b. Combined measured traits (MP+ index) and combined visually assessed traits for the site objective.

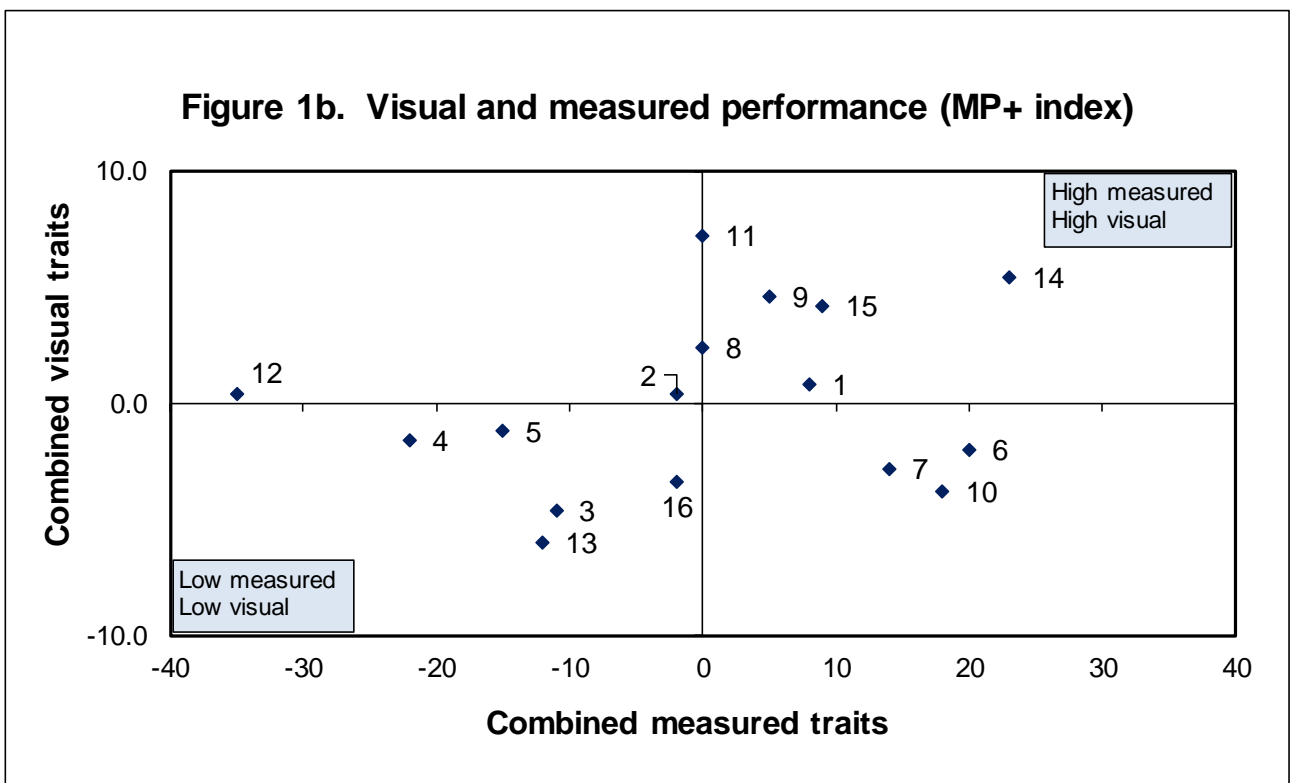


Figure 1c. Combined measured traits (FP+ index) and combined visually assessed traits for the site objective.

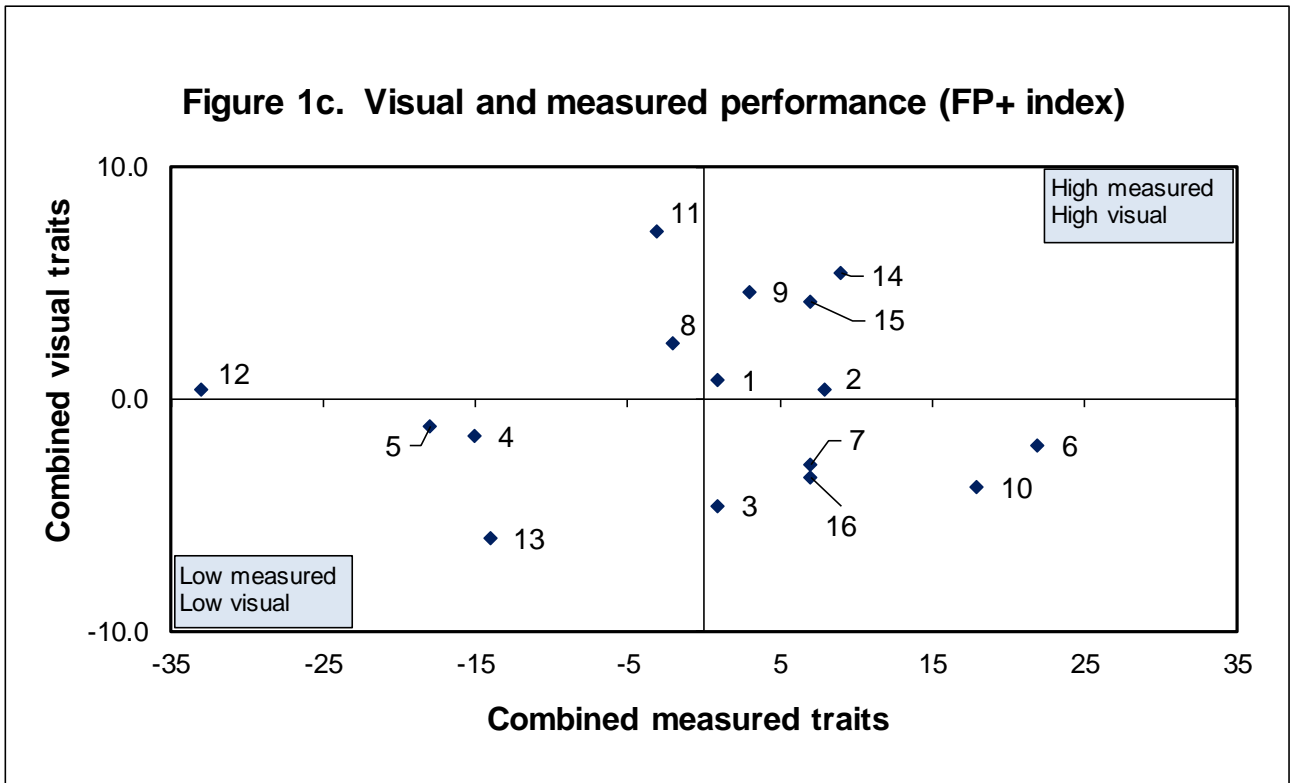
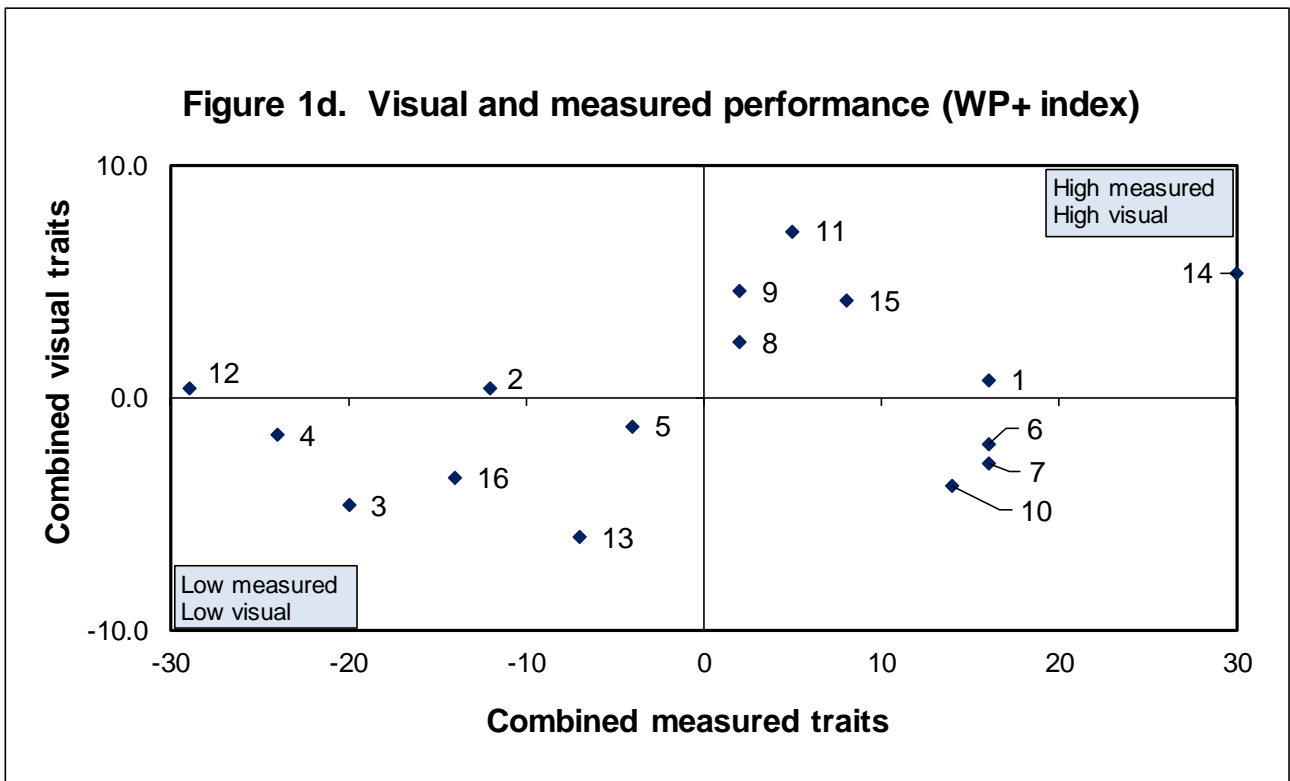


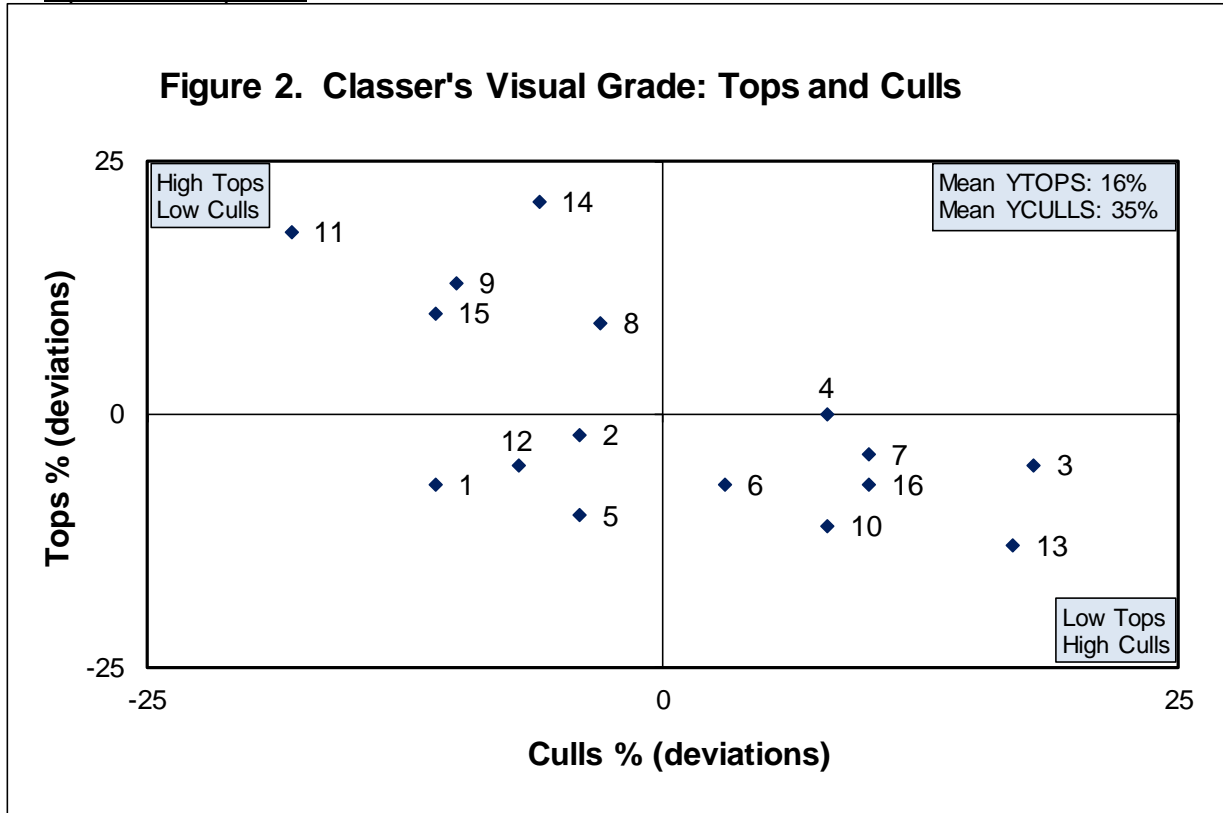
Figure 1d. Combined measured traits (WP+ index) and combined visually assessed traits for the site objective.



## Summary Graphs

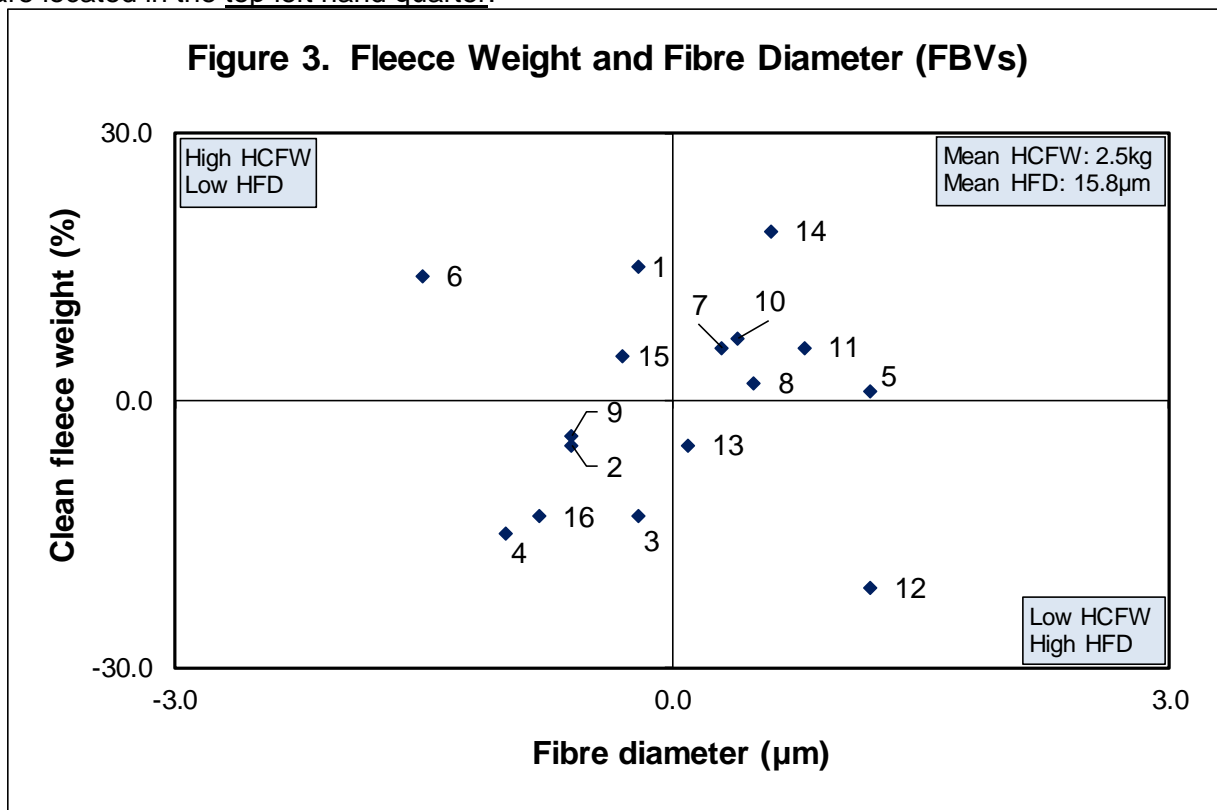
**Figure 2. Classer's Visual Grade - Tops and Culls**

The graph describes performance for Classer's Visual Tops Grade on the side axis and Culls Grade on the bottom axis. Sires that have above average Tops and below average Culls are in the top left hand quarter.



**Figure 3. Fleece Weight and Fibre Diameter (FBVs)**

The graph describes performance for fleece weight on the side axis and fibre diameter on the bottom axis. Sires that are above average for fleece weight and below average fibre diameter are located in the top left hand quarter.

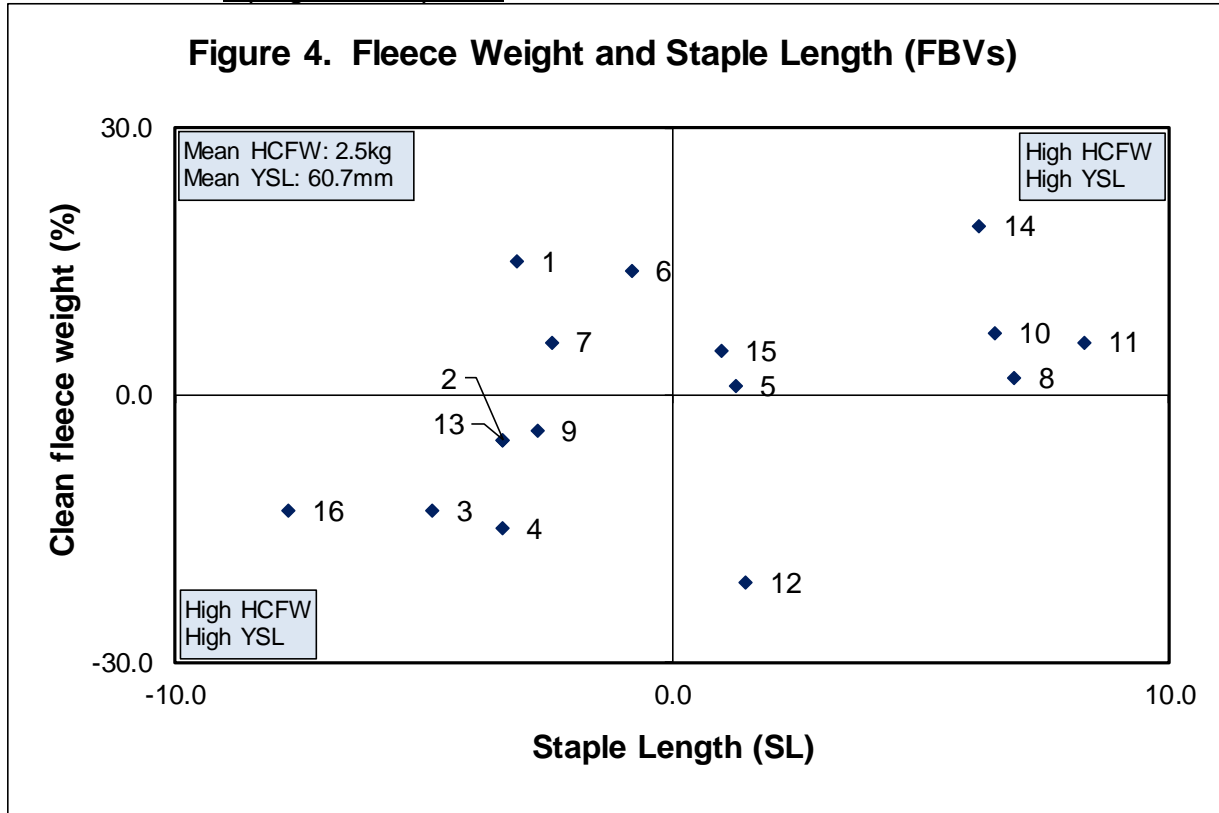




## Summary Graphs

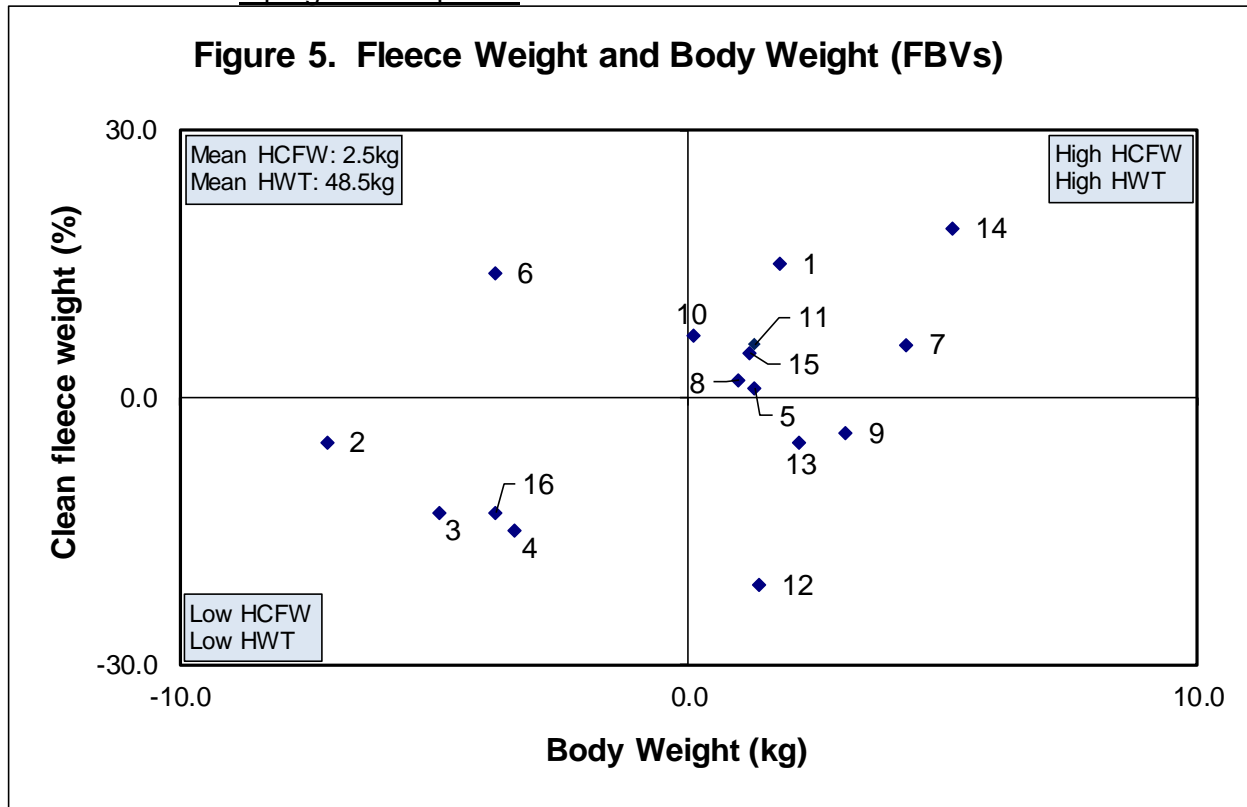
**Figure 4. Fleece Weight and Staple Length (FBVs)**

The graph describes performance for fleece weight on the side axis and staple length on the bottom axis. Sires that are above average for fleece weight and above average for staple length are located in the top right hand quarter.



**Figure 5. Fleece Weight and Body Weight (FBVs)**

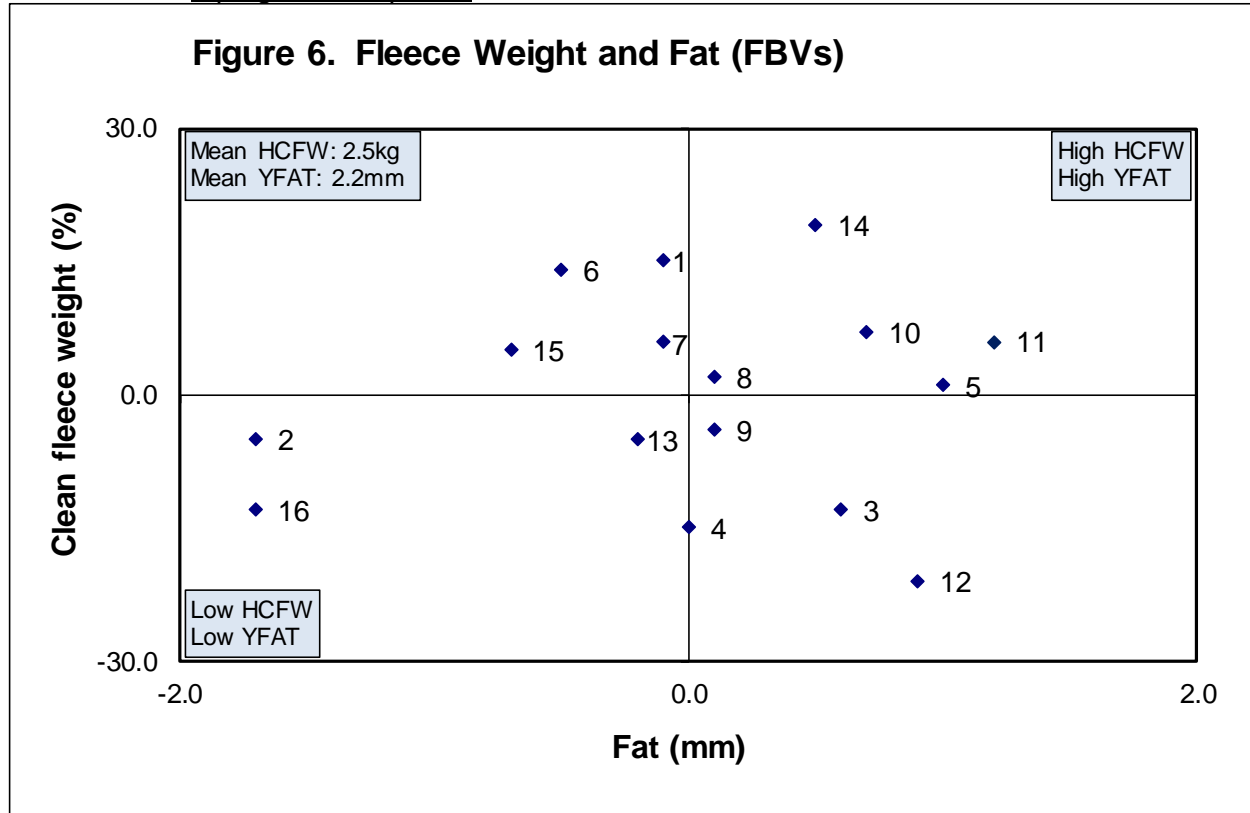
The graph describes performance for fleece weight on the side axis and body weight on the bottom axis. Sires that are above average for fleece weight and above average for body weight are located in the top right hand quarter.



## Summary Graphs

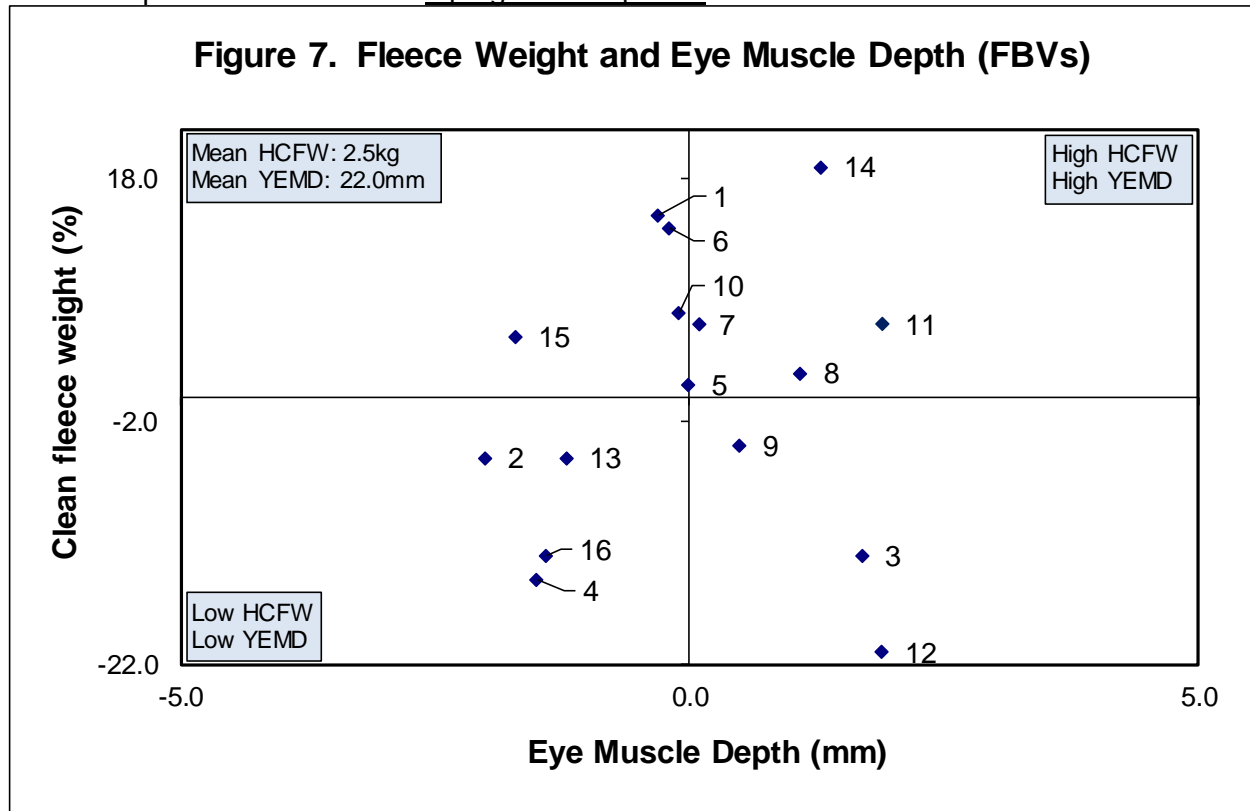
**Figure 6. Fleece Weight and Fat (FBVs)**

The graph describes performance for fleece weight on the side axis and fat depth on the bottom axis. Sires that are above average for fleece weight and above average for fat are located in the top right hand quarter.



**Figure 7. Fleece Weight and Eye Muscle Depth (FBVs)**

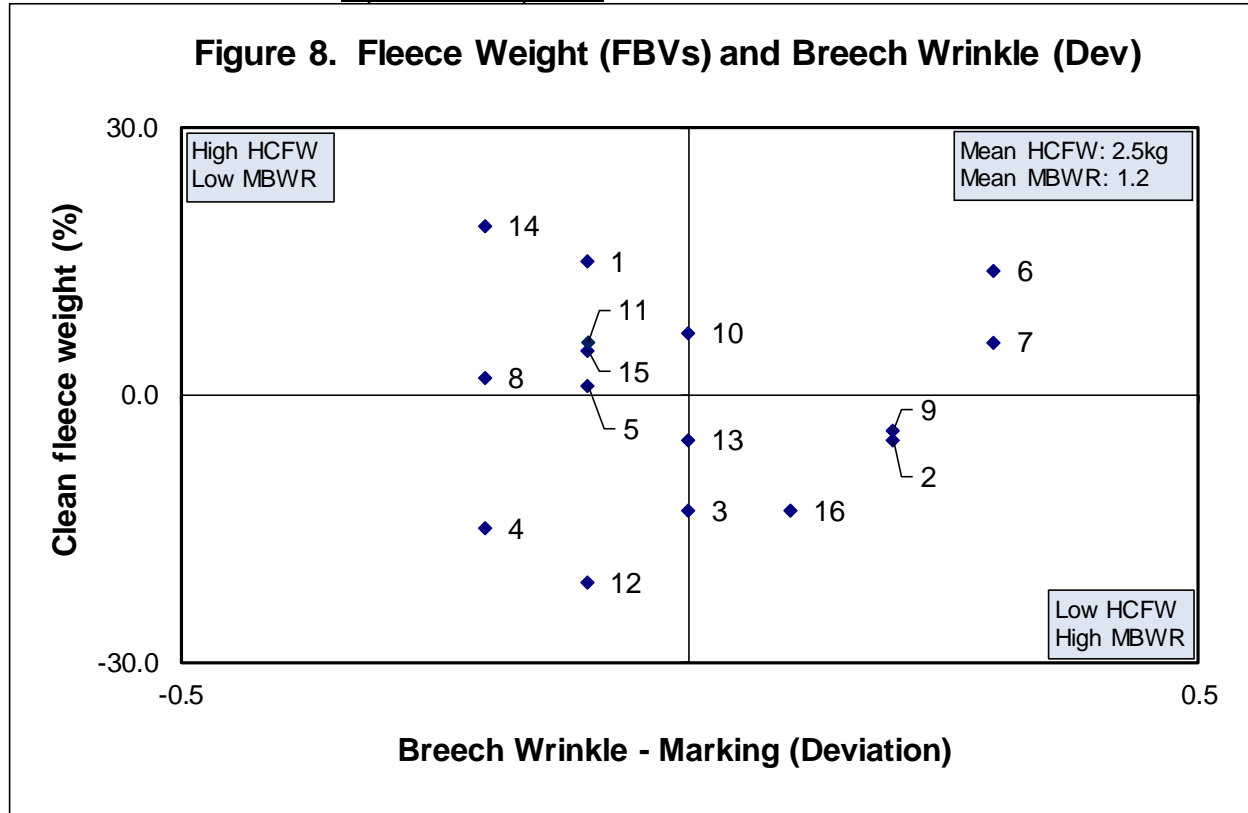
The graph describes performance for fleece weight on the side axis and eye muscle depth on the bottom axis. Sires that are above average for fleece weight and above average for eye muscle depth are located in the top right hand quarter.



## Summary Graphs

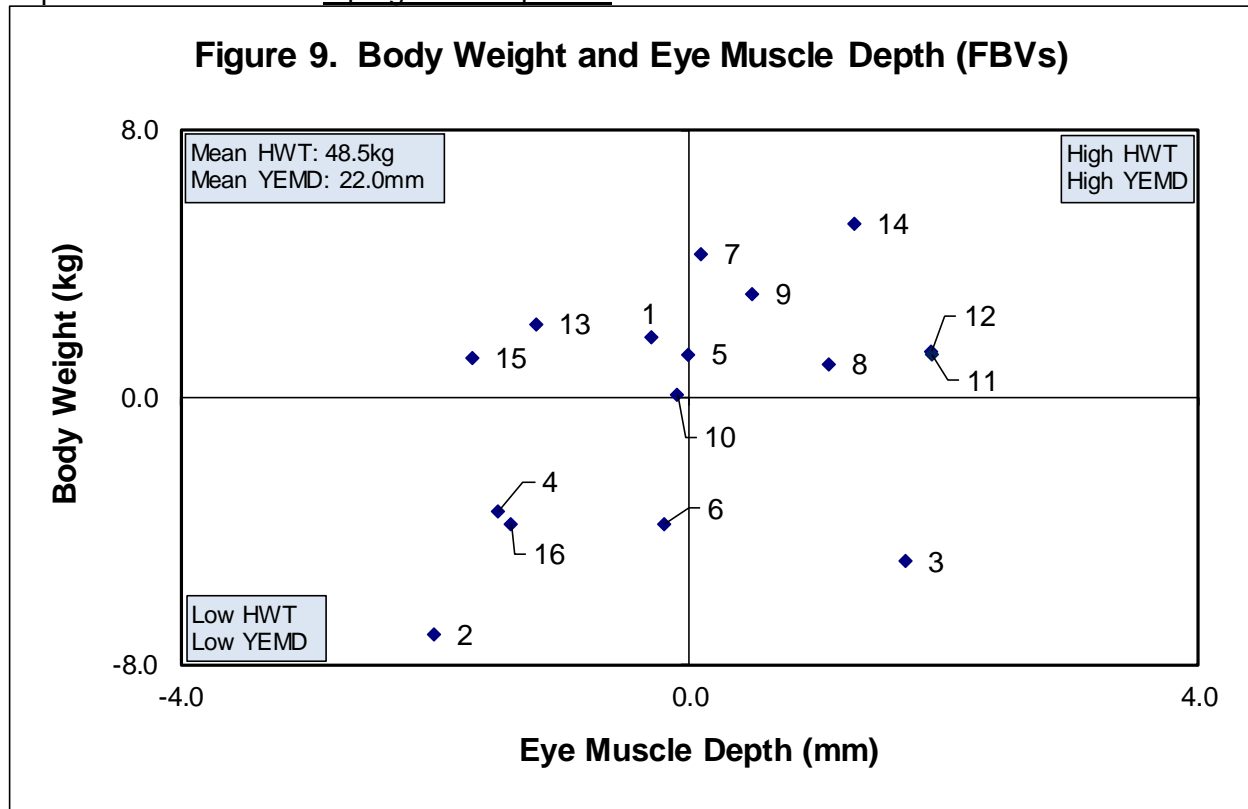
**Figure 8. Fleece Weight (FBV) and Breech Wrinkle (Dev)**

The graph describes performance for fleece weight on the side axis and breech wrinkle on the bottom axis. Sires that are above average for fleece weight and below average for breech wrinkle are located in the top left hand quarter.



**Figure 9. Body Weight and Eye Muscle Depth (FBVs)**

The graph describes performance for body weight on the side axis and eye muscle depth on the bottom axis. Sires that are above average for body weight and above average for eye muscle depth are located in the top right hand quarter.



## Summary Graphs

### Figure 10. Staple Strength and Worm Egg Count (FBVs)

The graph describes performance for staple strength on the side axis and worm egg count on the bottom axis. Sires that are above average for staple strength and below average for worm egg count are located in the top left hand quarter.

Worm Egg Count (WEC) not measured

## Understanding the Results – Measured Traits & Classer’s Visual Grade

<b>Breeders flock, Sire number:</b>	Identity of the breeder’s flock and the sire’s number or name.
<b>Number of progeny:</b>	The number of progeny a sire had at the most recent measured analysis. Average number of progeny is included in Table 1.
<b>Flock Breeding Values:</b>	<p>Flock Breeding Values (FBVs) are Estimated Breeding Values (EBVs) calculated by Sheep Genetics for the sires evaluated in this report. Only data from this site evaluation is used in the calculation of these FBVs. FBVs describe the relative breeding value (genetic performance) of the sires (in this case based on the performance of their progeny). A sire’s progeny will express half of their sire’s FBV. FBVs do not necessarily reflect the sire’s observed performance, which is a combination of both genetic and environmental influences. FBVs are an estimate of the genetic component of the sheep’s performance.</p> <p>The highest performing sires for each trait (trait leaders) are highlighted by shading. Curvature is the possible exception when for many breeders the optimum score is in the middle of the range therefore trait leaders have not been highlighted.</p>
<b>Traits:</b> Abbreviation, trait and the (units reported)	<p>GFW: Greasy fleece weight (percentage).            CFW: Clean fleece weight (percentage).            FD: Average fibre diameter (micron).            WT: Body weight (kilograms).            FDCV: Fibre diameter coefficient of variation (percentage).            SL: Staple length (mm) at the mid-side.            SS: Staple strength (N/ktex) at the mid-side.            EMD: Eye muscle depth (mm) at the ‘C’ site.            FAT: Fat depth (mm) at the ‘C’ site.            CURV: Fibre curvature (degrees).            WEC: Worm egg count (% deviation in worm burden of sire’s progeny).</p>
<b>Age at assessment:</b>	<p>M = Marking - 42 to 70 days (6 – 10 weeks of age)            W = Weaning - 42 to 120 days (6 weeks to 4 months of age).            E = Early Post Weaning - 120 to 210 days (4 to 7 months of age).            P = Post Weaning - 210 to 300 days (7 to 10 months of age).            Y = Yearling - 300 to 400 days (10 to 13 months of age).            H = Hogget - 400 to 540 days (13 to 18 months of age).            A = Adult - 540 days or older (18 months and older).</p>
<b>Classer's Visual Grade:</b>	<p>A classer grades all progeny as either Tops, Flocks or Culls based on their visual assessment of all traits relative to the site’s Breeding Objective. The percentage deviation from the average of Tops and Culls is presented in this report. Average percentage of Tops and Culls for the entire drop is included in Table 1.</p> <p>Page 7 provides more detail on Classer’s Visual Grade and the site’s Breeding Objective.</p>

**Table 3. Wool Measured Traits plus Classer's Visual Grade**

Sire Code	Breeder's flock, Sire name	Number of Progeny	Flock Breeding Values (deviations)							Classer's Visual Grade <sup>1</sup>	
			GFW % H <sup>^</sup>	CFW % H	FD μm H	FDCV % H	SL mm Y	SS N/ktex Y	CURV deg/mm H	Tops % Y	Culls % Y
1	Collinsville Poll, 135111	34	13	15	-0.2	0.6	-3.1	-8.0	4.2	-7	-11
2	Flairdale Poll, 150078	29	-6	-5	-0.6	0.2	-3.4	6.3	-5.6	-2	-4
3	Greenfields Poll, 140345	23	-12	-13	-0.2	-0.1	-4.8	6.7	-3.5	-5	18
4	Gunallo Poll, 140007	42	-14	-15	-1.0	0.4	-3.4	-5.4	3.7	0	8
5	Hamilton Run Poll, 150600	36	4	1	1.2	1.3	1.3	-3.1	-1.5	-10	-4
6	Hazeldean, 13.4936	29	10	14	-1.5	0.6	-0.8	-1.0	3.9	-7	3
7	Hilton Heath Poll, 14Y447	40	6	6	0.3	1.5	-2.4	0.7	-0.8	-4	10
8	Kelvale Poll, 150120	47	2	2	0.5	0.0	6.9	0.0	-0.6	9	-3
9	Leahcim Poll, 152775	36	-6	-4	-0.6	-1.9	-2.7	-2.0	-2.9	13	-10
10	Malleetech Poll, 155180	35	10	7	0.4	-0.1	6.5	10.1	1.0	-11	8
11	Mumblebone, 130850	36	5	6	0.8	-1.6	8.3	0.2	-0.1	18	-18
12	Pepper Well Poll, 155227	36	-16	-21	1.2	-0.5	1.5	-2.7	4.7	-5	-7
13	Poll Boonoke, 150026	33	-3	-5	0.1	1.3	-3.4	-4.4	5.5	-13	17
14	Ridgway Advance Poll, 150103	24	15	19	0.6	-0.8	6.2	-3.9	-7.1	21	-6
15	Ridgway Poll, 140721	40	2	5	-0.3	-1.7	1.0	-0.6	-3.1	10	-11
16	Roemahkita Poll, 150092	33	-10	-13	-0.8	0.8	-7.7	6.9	2.3	-7	10

<sup>^</sup> W = Weaning (42 to 120 days); P = Post Weaning (210 to 300 days); Y = Yearling (300 to 400 days); H = Hogget (400 to 540 days); A = Adult (540 days and older)

<sup>1</sup> Classer's Visual Grade is expressed as the percentage deviation of average Tops% and Culls%.

**Table 4. Carcase and WEC Measured Traits plus Classer's Visual Grade**

Sire Code	Breeder's flock, Sire name	Number of progeny	Flock Breeding Values (deviations)					Classer's Visual Grade <sup>1</sup>		
			WT			FAT	EMD	WEC	Tops	Culls
			W	Y	H	mm	mm	%	%	%
1	Collinsville Poll, 135111	34	-0.6	1.5	1.8	-0.1	-0.3	WEC not measured	-7	-11
2	Flairdale Poll, 150078	29	-1.4	-4.6	-7.1	-1.7	-2.0		-2	-4
3	Greenfields Poll, 140345	23	-0.3	-5.8	-4.9	0.6	1.7		-5	18
4	Gunallo Poll, 140007	42	-0.9	-2.5	-3.4	0.0	-1.5		0	8
5	Hamilton Run Poll, 150600	36	0.6	1.6	1.3	1.0	0.0		-10	-4
6	Hazeldean, 13.4936	29	-1.4	-4.1	-3.8	-0.5	-0.2		-7	3
7	Hilton Heath Poll, 14Y447	40	0.0	2.0	4.3	-0.1	0.1		-4	10
8	Kelvale Poll, 150120	47	0.5	0.9	1.0	0.1	1.1		9	-3
9	Leahcim Poll, 152775	36	1.3	2.7	3.1	0.1	0.5		13	-10
10	Malleetech Poll, 155180	35	1.7	-0.8	0.1	0.7	-0.1		-11	8
11	Mumblebone, 130850	36	-0.2	1.7	1.3	1.2	1.9		18	-18
12	Pepper Well Poll, 155227	36	-1.8	1.9	1.4	0.9	1.9		-5	-7
13	Poll Boonoke, 150026	33	1.6	1.2	2.2	-0.2	-1.2		-13	17
14	Ridgway Advance Poll, 150103	24	0.5	5.5	5.2	0.5	1.3		21	-6
15	Ridgway Poll, 140721	40	1.1	1.6	1.2	-0.7	-1.7		10	-11
16	Roemahkita Poll, 150092	33	-0.6	-2.9	-3.8	-1.7	-1.4		-7	10

<sup>^</sup> W = Weaning (42 to 120 days); P = Post Weaning (210 to 300 days); Y = Yearling (300 to 400 days); H = Hogget (400 to 540 days); A = Adult (540 days and older).

<sup>1</sup> Classer's Visual Grade is expressed as the percentage deviation of average Tops% and Culls%.

## Understanding the Results – Visual Trait Performance Results

The following description of trait scores is a summary of the detailed word and diagrammatical description of these scores in Version 2 (2013) of the Visual Sheep Scores booklet that is available free from AWI or at [www.merinosuperiorsires.com.au](http://www.merinosuperiorsires.com.au)

A deviation from the average trait score for all progeny is reported as well as the percentage of the sire's progeny recorded for each trait.

■ Fleece rot:	The severity of fleece rot from <b>1</b> (no fleece rot), <b>2 and 3</b> (bands of bacterial staining but no crusting), and <b>4 and 5</b> (bands of crusty fleece rot).
■ Wool colour:	Greasy wool colour scored from <b>1</b> (whitest) to <b>5</b> (yellow).
■ Wool character:	Definition and variation of crimp between and along the staple scored from <b>1</b> (well defined and regular) to <b>5</b> (undefined and large variation).
■ Dust penetration:	Degree of dust penetration from <b>1</b> (only tip <6%) to <b>5</b> (71 to 100% of staple).
■ Staple weathering:	The deterioration due to light and water from <b>1</b> (least, <6% of staple) to <b>5</b> (most, 71 to 100%) reflect the depth and degree of deterioration.
■ Staple structure:	The size and diameter of each staple from <b>1</b> (<6mm) to <b>5</b> (>30 mm).
■ Fibre pigmentation:	The percentage of dark fibres on any part of the sheep from <b>1</b> (0 pigmented fibres at any site) to <b>5</b> (71 to 100% pigmented fibres at one or more sites). This trait does not include random spot or recessive black.
■ Non-fibre pigmentation:	The percentage of pigmentation on the areas not shorn from <b>1</b> (0 pigmentation at any site) to <b>5</b> (71 to 100% pigmented area on one or more bare skin sites, <b>and/or</b> 71 to 100% of the total hoof area).
■ Recessive black: (Black)	Recessive black (black) is identified by relatively symmetrical markings on both sides of the face. There are two scores <b>1</b> (no recessive markings) and <b>5</b> (recessive markings). This trait does not include random spot or fibre pigmentation.
■ Random spot: (Spot)	Random spot (spot) is identified by rounded wool or hair spot/s, not symmetrical. There are two scores <b>1</b> (no spot/s) and <b>5</b> (spot/s). If both sides of the face or body are spotted the sheep should be scored as a recessive black.
■ Face cover:	Wool cover on the face scored from <b>1</b> (open face) to <b>5</b> (fully covered face).
■ Feet/Legs:	Conformation of feet and legs scored from <b>1</b> (very straight) to <b>5</b> (very angulated).
■ Body wrinkle:	The degree of body wrinkle from <b>1</b> (no wrinkle) to <b>5</b> (extensive wrinkle).
■ Jaw:	The alignment of the lower jaw and its teeth relative to the top jaw from <b>1</b> (very well aligned) to <b>5</b> (heavily undershot or overshot).
■ Back/Shoulder:	Conformation of the back and shoulder from <b>1</b> (very square) to <b>5</b> (very dipped or high).
■ Breech cover:	Size of natural bare area around the breech from <b>1</b> (large) to <b>5</b> (no bare).
■ Crutch cover:	Size of natural bare area in the pubic and groin from <b>1</b> (large) to <b>5</b> (no bare).
■ Breech wrinkle:	Degree of wrinkle at the tail set and hind legs from <b>1</b> (nil) to <b>5</b> (extensive).
■ Dag:	Degree of dag adhering to the breech and legs from <b>1</b> (nil) to <b>5</b> (extensive).
■ Urine:	Degree of urine stained wool in the breech area, including the hind legs from <b>1</b> (nil) to <b>5</b> (extensive).



**Table 5a. Visual trait assessments – Wool Quality**

Visually assessed traits reported were scored at their latest assessment with the exception of pigmentation which was scored at marking (Spot updated on an ongoing basis) and breech traits recorded at marking time (or later in unmulesed flocks with the exception of Dag and Urine). Traits are reported as a deviation (Dev) from the average trait score for all progeny. The percentage of a sire's progeny assessed for each score is also reported. No adjustments are made to the data to improve the accuracy of the results as is the case with sire means or breeding values. For the majority of breeder's objectives a negative deviation would be considered favourable and the larger the deviation the better.

Sire Code	Breeder's flock, Sire name	Wool Quality - Yearling																							
		Fleece Rot					Wool Colour					Wool Character					Dust Penetration								
		Dev	1	2	3	4	5	Dev	1	2	3	4	5	Dev	1	2	3	4	5	Dev	1	2	3	4	5
1	Collinsville Poll, 135111	0.2	71	24	5	0	0	0.1	62	35	3	0	0	0.0	9	35	53	3	0	-0.1	0	79	21	0	0
2	Flairdale Poll, 150078	0.0	86	10	4	0	0	-0.1	76	24	0	0	0	-0.3	24	45	24	7	0	0.0	0	79	17	4	0
3	Greenfields Poll, 140345	-0.2	96	4	0	0	0	0.0	74	26	0	0	0	0.3	9	22	52	13	4	0.0	0	78	22	0	0
4	Gunallo Poll, 140007	0.1	81	14	0	3	2	0.0	74	24	2	0	0	0.0	24	29	31	14	2	0.1	3	64	31	2	0
5	Hamilton Run Poll, 150600	0.0	78	22	0	0	0	0.3	47	50	3	0	0	0.4	6	31	44	11	8	0.2	0	58	39	3	0
6	Hazeldean, 13.4936	-0.1	97	0	3	0	0	-0.2	97	0	3	0	0	-0.5	34	41	21	4	0	-0.2	0	97	3	0	0
7	Hilton Heath Poll, 14Y447	0.1	78	20	2	0	0	0.2	55	42	3	0	0	0.1	12	28	48	10	2	-0.1	0	82	18	0	0
8	Kelvale Poll, 150120	-0.1	89	11	0	0	0	-0.1	81	19	0	0	0	0.0	13	40	36	9	2	0.0	0	77	23	0	0
9	Leahcim Poll, 152775	0.0	83	14	3	0	0	-0.2	94	6	0	0	0	-0.4	33	33	25	9	0	-0.1	0	81	19	0	0
10	Malleetech Poll, 155180	0.2	74	17	6	0	3	0.1	60	37	3	0	0	0.4	3	23	63	11	0	0.2	0	54	46	0	0
11	Mumblebone, 130850	-0.1	89	8	3	0	0	-0.1	83	14	3	0	0	-0.1	19	31	42	8	0	0.0	0	78	19	3	0
12	Pepper Well Poll, 155227	0.1	75	22	3	0	0	0.2	56	44	0	0	0	0.4	11	14	56	11	8	0.2	0	58	42	0	0
13	Poll Boonoke, 150026	0.0	76	24	0	0	0	0.2	52	48	0	0	0	0.6	0	21	55	18	6	0.2	0	61	36	3	0
14	Ridgway Advance Poll, 150103	-0.1	96	0	4	0	0	-0.1	88	8	4	0	0	-0.1	21	33	38	8	0	0.0	0	79	17	4	0
15	Ridgway Poll, 140721	-0.1	92	8	0	0	0	-0.1	80	20	0	0	0	-0.6	38	32	30	0	0	0.0	4	72	22	2	0
16	Roemahkita Poll, 150092	0.0	82	15	0	3	0	-0.1	79	21	0	0	0	-0.2	12	52	30	6	0	-0.1	0	88	12	0	0
	<b>Average performance</b>	<b>1.2</b>	<b>84</b>	<b>13</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1.3</b>	<b>72</b>	<b>26</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2.5</b>	<b>17</b>	<b>32</b>	<b>40</b>	<b>9</b>	<b>2</b>	<b>2.3</b>	<b>0</b>	<b>74</b>	<b>24</b>	<b>2</b>	<b>0</b>

**Table 5b. Visual trait assessments – Wool Quality and Pigmentation**

For the majority of breeder’s objectives a negative deviation for wool quality traits would be considered favourable and the larger the deviation the better. Staple Structure is the possible exception when for many breeders the optimum score is in the middle of the range therefore trait leaders have not been highlighted. Four pigmentation traits are reported. Fibre pigmentation and Non-fibre pigmentation are scored 1 to 5, however Recessive black and Random spot are scored 1 (no pigmentation of this type) or 5 (when the trait is expressed). Only the percentage progeny for each sire that a score 5 is recorded, are reported for Recessive black and Random spot.

Sire Code	Breeder's flock, Sire name	Wool Quality - Yearling										
		Staple Weathering					Staple Structure					
		Dev	1	2	3	4	5	Dev	1	2	3	4
1	Collinsville Poll, 135111						0.1	0	21	44	35	0
2	Flairdale Poll, 150078						0.0	4	24	48	17	7
3	Greenfields Poll, 140345						-0.4	22	26	22	30	0
4	Gunallo Poll, 140007						-0.2	3	38	40	14	5
5	Hamilton Run Poll, 150600						-0.1	17	11	39	33	0
6	Hazeldean, 13.4936						0.4	0	21	28	45	6
7	Hilton Heath Poll, 14Y447						0.3	5	12	32	48	3
8	Kelvale Poll, 150120	Staple Weathering not scored					0.0	4	15	55	26	0
9	Leahcim Poll, 152775		-0.1	9	19	50	22	0				
10	Malleetech Poll, 155180		0.2	2	20	43	26	9				
11	Mumblebone, 130850		0.2	3	14	44	39	0				
12	Pepper Well Poll, 155227		-0.5	11	36	47	6	0				
13	Poll Boonoke, 150026		-0.6	18	33	39	6	4				
14	Ridgway Advance Poll, 150103		0.4	0	17	29	50	4				
15	Ridgway Poll, 140721		0.2	2	18	40	38	2				
16	Roemahkita Poll, 150092		0.3	7	12	39	33	9				
	<b>Average performance</b>						<b>3.0</b>	<b>7</b>	<b>21</b>	<b>40</b>	<b>29</b>	<b>3</b>

Pigmentation - Marking													
Fibre pigmentation					Non-fibre pigmentation					Black	Spot		
Dev	1	2	3	4	5	Dev	1	2	3	4	5	5	5
0.0	97	3	0	0	0	0.1	20	31	43	6	0	0	0
0.0	100	0	0	0	0	0.3	3	50	40	7	0	0	0
0.0	100	0	0	0	0	-0.3	36	40	20	4	0	0	0
0.0	100	0	0	0	0	-0.5	40	47	13	0	0	0	4
0.0	97	3	0	0	0	0.0	18	51	28	3	0	0	0
0.1	94	3	0	3	0	0.3	7	47	34	12	0	0	0
0.0	100	0	0	0	0	0.0	15	49	36	0	0	0	2
0.0	100	0	0	0	0	0.0	18	43	35	4	0	0	0
0.0	95	5	0	0	0	-0.3	28	50	22	0	0	0	0
0.0	100	0	0	0	0	0.4	5	37	50	8	0	0	0
0.0	100	0	0	0	0	0.0	24	38	38	0	0	0	0
0.0	100	0	0	0	0	-0.4	38	41	21	0	0	0	0
0.0	100	0	0	0	0	-0.3	33	42	25	0	0	0	0
0.0	96	4	0	0	0	0.3	4	44	48	4	0	0	0
0.0	100	0	0	0	0	0.0	11	56	33	0	0	0	0
0.0	97	3	0	0	0	0.2	9	49	37	5	0	0	0
<b>1.0</b>	<b>99</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2.2</b>	<b>19</b>	<b>45</b>	<b>33</b>	<b>3</b>	<b>0</b>		

**Table 5c. Visual trait assessments – Conformation**

Traits are reported as a deviation (Dev) from the average trait score for all progeny. The percentage of a sire's progeny assessed for each score is also reported. No adjustments are made to the data to improve the accuracy of the results as is the case with sire means or breeding values.

For the majority of breeder's objectives a negative deviation would be considered favourable and the larger the deviation the better. Face cover is the possible exception when for many breeders the optimum score is in the middle of the range therefore trait leaders have not been highlighted.

Sire Code	Breeders flock, Sire name	Conformation - Yearling																													
		Jaw					Legs and Feet					Shoulder and Back					Face Cover					Body Wrinkle									
		Dev	1	2	3	4	5	Dev	1	2	3	4	5	Dev	1	2	3	4	5	Dev	1	2	3	4	5	Dev	1	2	3	4	5
1	Collinsville Poll, 135111	0.0	100	0	0	0	0	-0.3	76	0	24	0	0	0.3	69	0	31	0	0	-0.2	0	15	74	5	6	0.4	34	44	12	10	0
2	Flairdale Poll, 150078	0.0	100	0	0	0	0	0.0	66	0	31	0	3	0.2	78	0	17	0	5	0.2	0	3	52	45	0	0.2	35	52	9	4	0
3	Greenfields Poll, 140345	0.0	96	4	0	0	0	-0.1	70	0	26	0	4	-0.1	87	0	13	0	0	0.3	0	0	57	30	13	-0.2	65	30	5	0	0
4	Gunallo Poll, 140007	0.1	95	0	3	0	2	0.1	64	2	24	0	10	-0.1	85	0	15	0	0	0.1	0	2	67	21	10	-0.1	59	36	5	0	0
5	Hamilton Run Poll, 150600	0.0	100	0	0	0	0	0.2	56	0	42	2	0	-0.2	91	0	9	0	0	-0.1	0	5	78	17	0	-0.3	71	29	0	0	0
6	Hazeldean, 13.4936	0.1	97	0	3	0	0	0.1	59	10	24	0	7	0.1	78	0	22	0	0	0.2	0	0	55	41	4	0.5	30	44	15	11	0
7	Hilton Heath Poll, 14Y447	0.0	100	0	0	0	0	0.3	57	0	32	0	11	0.1	75	0	25	0	0	0.3	3	2	45	38	12	0.5	35	35	15	15	0
8	Kelvale Poll, 150120	0.0	100	0	0	0	0	0.3	57	2	30	0	11	-0.3	98	0	2	0	0	-0.1	0	9	72	19	0	-0.4	79	21	0	0	0
9	Leahcim Poll, 152775	0.0	100	0	0	0	0	-0.3	81	0	17	0	2	-0.1	84	0	16	0	0	0.0	0	6	67	25	2	-0.2	66	28	6	0	0
10	Malleetech Poll, 155180	0.0	100	0	0	0	0	0.7	43	0	43	3	11	0.5	58	0	42	0	0	-0.1	3	3	74	17	3	0.5	21	55	18	6	0
11	Mumblebone, 130850	0.0	100	0	0	0	0	-0.2	78	0	19	0	3	-0.1	88	0	12	0	0	-0.5	8	14	72	6	0	-0.3	74	26	0	0	0
12	Pepper Well Poll, 155227	0.0	100	0	0	0	0	-0.4	81	0	19	0	0	-0.1	89	0	11	0	0	-0.3	8	8	67	17	0	-0.2	67	28	5	0	0
13	Poll Boonoke, 150026	0.0	100	0	0	0	0	0.0	70	0	21	3	6	0.2	73	0	27	0	0	0.1	0	0	76	18	6	-0.2	73	17	7	3	0
14	Ridgway Advance Poll, 150103	0.0	100	0	0	0	0	0.0	67	0	29	0	4	-0.1	87	0	13	0	0	0.0	0	0	79	17	4	-0.1	61	30	9	0	0
15	Ridgway Poll, 140721	0.0	100	0	0	0	0	0.0	68	0	28	0	4	-0.2	94	0	6	0	0	0.0	3	10	57	20	10	-0.3	74	20	6	0	0
16	Roemahkita Poll, 150092	0.0	100	0	0	0	0	-0.4	91	0	3	0	6	0.0	79	0	21	0	0	0.1	3	3	61	21	12	0.2	48	24	24	4	0
	<b>Average performance</b>	<b>1.0</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.7</b>	<b>68</b>	<b>0</b>	<b>26</b>	<b>1</b>	<b>5</b>	<b>1.4</b>	<b>82</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>3.2</b>	<b>2</b>	<b>5</b>	<b>66</b>	<b>22</b>	<b>5</b>	<b>1.6</b>	<b>56</b>	<b>33</b>	<b>8</b>	<b>3</b>	<b>0</b>

**Table 5d. Visual trait assessments – Breech**

Traits are reported as a deviation (Dev) from the average trait score for all progeny. The percentage of a sire’s progeny assessed for each score is also reported. No adjustments are made to the data to improve the accuracy of the results as is the case with sire means or breeding values.

For the majority of breeder’s objectives, a negative deviation would be considered favourable and the larger the deviation the better.

Sire Code	Breeders flock, Sire name	Breech Visual Traits											
		Breech Cover Marking					Breech Wrinkle Marking						
		Dev	1	2	3	4	5	Dev	1	2	3	4	5
1	Collinsville Poll, 135111	-0.2	0	6	43	43	6	-0.1	80	14	3	0	0
2	Flairdale Poll, 150078	0.1	0	7	30	50	13	0.2	67	23	10	0	0
3	Greenfields Poll, 140345	-0.3	0	4	52	32	8	0.0	72	16	8	0	0
4	Gunallo Poll, 140007	0.1	0	2	33	56	9	-0.2	91	9	0	0	0
5	Hamilton Run Poll, 150600	0.0	0	0	44	49	7	-0.1	90	8	2	0	0
6	Hazeldean, 13.4936	0.1	0	0	38	50	12	0.3	62	22	12	4	0
7	Hilton Heath Poll, 14Y447	0.0	3	0	33	60	4	0.3	64	22	9	5	0
8	Kelvale Poll, 150120	0.2	0	2	20	76	2	-0.2	96	4	0	0	0
9	Leahcim Poll, 152775	0.0	0	2	38	55	5	0.2	75	18	3	2	2
10	Malleetech Poll, 155180	0.0	0	3	39	55	3	0.0	84	11	5	0	0
11	Mumblebone, 130850	0.1	0	3	38	49	10	-0.1	87	13	0	0	0
12	Pepper Well Poll, 155227	0.0	0	0	38	59	3	-0.1	84	14	2	0	0
13	Poll Boonoke, 150026	0.0	0	3	47	42	8	0.0	83	11	6	0	0
14	Ridgway Advance Poll, 150103	-0.1	0	0	56	36	8	-0.2	96	4	0	0	0
15	Ridgway Poll, 140721	-0.2	0	3	42	49	2	-0.1	80	13	3	0	0
16	Roemahkita Poll, 150092	0.1	0	3	31	57	9	0.1	74	20	3	3	0
	<b>Average performance</b>	<b>3.6</b>	<b>0</b>	<b>2</b>	<b>39</b>	<b>51</b>	<b>7</b>	<b>1.2</b>	<b>80</b>	<b>14</b>	<b>4</b>	<b>1</b>	<b>0</b>

### Accuracy of Flock Breeding Values

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Flock Breeding Values (FBVs) are reported by Sheep Genetics (SG). FBVs express the expected performance of progeny of a sire relative to another sire in the evaluation when mated to the same standard of ewes. FBVs improve the accuracy of sire results because they account for the association between traits, adjustment for birth effects and the number of progeny a sire has in the analysis.

*True Breeding Values* would be achieved if the number of progeny evaluated for each sire were infinite. Because the number of progeny in the evaluation is not infinite, performance shown in this report is described as *Flock Breeding Values*.

Without progeny test information the correlation between the *Flock* and *True Breeding Value* of sires from different sources would be zero (0.0%). The correlation between *Flock* and *True Breeding Value* improves rapidly from 0.0% with no progeny to 77% with 10 progeny. The rate of improvement in correlation slows from 86% with 20 progeny, to 90% with 30 progeny and 92% with 40 progeny. With an infinite population the correlation is 100%. Note that the correlation used in the above example is for a trait such as fibre diameter with a high heritability (0.5).

A heritability of 0.5 indicates that half or 50% of the measured performance is passed onto offspring. A heritability of 0.35 indicates 35% is passed on. The FBVs that are shown in this report have already accounted for heritability and therefore describe the performance that can be expected from a sire's progeny.

### Link Sires

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Link sires provide the 'genetic link' between sire evaluation sites located across Australia to allow all sires entered in these site evaluations to have their performance reported relative to each other in Merino Superior Sires. Merino Superior Sires reports sires from across all effectively linked sire evaluation sites and across all evaluations at these sites. Link sires are therefore a vital component of the sire evaluation.

To be used as a link a sire must have at least 25 progeny assessed at 1st Assessment at one accredited site. Site reports provide valuable information not reported in Merino Superior Sires however Merino Superior Sires reports the performance of a large number of sires which can provide a wider perspective of the elite sires available across many flocks in Australia.

### Calculation of Combined Information

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Combined measured trait performance is calculated as Index – 100. Three different index options are provided to cater for breeders' different breeding objectives.

Combined visual trait performance is calculated as:  
(Classer's Visual Grade Tops% – Culls%)/5,  
expressed as a deviation from average  
(average Tops% – average Culls%)/5.

#### Example

Sire's performance:

- AMSEA DP+ Index value = 119.7
- Tops% = 25.5 (average Tops% = 25.1)
- Culls% = 17.6 (average Culls% = 16.4)

Combined Measured = 119.70 – 100 = 19.7  
Combined Visual = ((25.5 – 17.6)/5) – ((25.1 – 16.4)/5)  
= 7.9/5 – 8.7/5  
= 1.58 – 1.74 = -0.1

# South Australia

2017 Drop  
Hogget Assessment

