Pingelly

2016 Drop
Post Weaning Assessment

Within-Site Results

Conducted by

The Federation of Performance Sheep Breeders (WA Branch)

under the auspices of

The Australian Merino Sire Evaluation Association

Merino Lifetime Productivity Project Site

June 2017

Acknowledgement

The Merino Lifetime Productivity Project is being undertaken in partnership between the Australian Merino Sire Evaluation Association Incorporated (AMSEA) and Australian Wool Innovation (AWI). AMSEA and AWI would like to acknowledge those entities who also contribute funding, namely Woolgrowers through sire evaluation entry fees, site hosts, site committee in-kind contributions, and sponsors of AMSEA. A special acknowledgement is also made to the Australian Government who support research, development and marketing of Australian wool.

Disclaimer

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

Foreword

Yardstick Central Test Sire Evaluation - Pingelly

YARDSTICK is an accredited Central Test Sire Evaluation (CTSE) site evaluation. It conforms to the requirements of the Australian Merino Sire Evaluation Association (AMSEA).

The Federation of Performance Sheep Breeders WA (Inc.) runs the YARDSTICK Sire Evaluation site.

YARDSTICK has the following background.

- A total of 20 evaluations have been run by YARDSTICK(1993-2011& 2015 drop)
- These evaluations have taken place at Romilly Hills, Dale River WA (1993-2005 drop) and the Great Southern Agricultural Research Institute (GSARI), Department of Agriculture and Food, Katanning and Mount Barker (2006-2011 and 2015 drop).
- The 2016 drop trial is taking place at University of Western Australia's Ridgefield Research Farm at Pingelly.

MERINO PRODUCTIVITY PROJECT

The Pingelly site of the Merino Lifetime Productivity Project (MLP) is one of five linked sites across the country that are evaluating lifetime productivity of Merino Ewes from different genetic sources. The project is funded and supported by Australian Wool Innovation (AWI) and the Australian Sire Evaluation Association (AMSEA). Murdoch University manages the Pingelly MLP project and it is hosted by the University of Western Australia on their Ridgefield research station.

AI ewes born in both 2016 and 2017 will be retained for annual natural mating, classing and assessment of wool and weight traits for seven years. The five linked sites will initially operate like a standard sire evaluation site – following the rigorous and independently measured and visual assessment protocols. At the conclusion of the standard sire evaluation (once progeny are 18-24 months of age) AWI will support the ongoing measurement and visual classing of ewe progeny through 4-5 joinings and annual shearings. The number of ewes AI'd to each sire is increased to 90 ewes to ensure that there will be sufficient ewe progeny numbers per sire throughout life. More MLP information is available at www.wool.com/MLP.

Industry supports the project with semen supplied from entered sires and an active site committee who supply labour and guidance to the project. Murdoch University are acknowledged for their generous in-kind contribution. Thanks to these people for their involvement.

Brett Jones
Chairman – Pingelly MLP Site Committee

Contents

2016 Drop Post Weaning Assessment

The information in this Site Report provides an update of the assessment of the 2016 drop, including the Post Weaning assessments of the sire's progeny performance for measured and visually assessed traits.

The Post Weaning fleece and visual assessments of the ewes were made at 8.5 months of age with 8.5 months of wool growth. Post Weaning shearing of the ewes was conducted at 9.5 months of age with 9.5 months of wool growth.

Updated Site Reports will be published annually, or when new information is available.

Site Committee

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Sire and Owner Details

Breeders flock, Sire name Sire ID [#], Breed [†]	Contact Details
Billandri Poll, 130641 600571-2013-130641, Poll Merino	**Bill Sandilands** Billandri, Kendenup WA 6323 P: (08) 9851 4030, M: 0427 51 4030, E: billandri@iinet.net.au
Boolading Poll, 120708 (Unreg) 609039-2012-120708, Poll Merino	**Lachlan Ewen** PO Box 53, Darkan WA 6392 P: (08) 9736 1389, M: 0429 36 1389, E: derby.grove@westnet.com.au
Claypans Poll, 130597 600827-2013-130597, Poll Merino	**Steven Bolt** PO Box 226, Corrigin WA 6375 M: 0427 65 2043, E: steven_bolt@hotmail.com
East Mundulla, (Jonty) 090137 503506-2009-090137, Merino	**Daniel Gooding** PO Box 205, Lake Grace WA 6353 P: (08) 9864 9333, M: 0429 13 8890, E: dangemgooding@activ8.net.au
Ejanding Poll, 145096 600443-2014-145096, Poll Merino	**Brett Jones** RMB 2000, Dowerin WA 6461 P: (08) 9632 3012, M: 0428 32 3012, E: ejandingstud@bigpond.com
Haddon Rig, 2.715 500048-2012-120715, Merino	**Andy Maclean** Haddon Rig, Warren NSW 2824 P: (02) 6847 4405, M: 0429 66 2226, E: haddonrig@bigpond.com
Hazeldean, 11.43 (Link) 500383-2011-000043, Merino	**Jim Litchfield** Hazeldean Pty Ltd, Cooma NSW 2630 P: (02) 6453 5555, M: 0417 67 6561, E: admin@hazeldean.com.au
Ingle Poll, 130387 (Unreg) 609154-2013-130387, Poll Merino	**Ashley Hobbs** PO Box 65, Brookton WA 6306 P: (08) 9642 1379, M: 0429 42 1379, E: ingle@wn.com.au
Leahcim Poll, 090918 (Link) 600815-2009-090918, Poll Merino	**Andrew and Rosemary Michael** PO Box 31, Snowtown SA 5520 P: (08) 8865 2085, M: 0418 82 8431, E: leahcimgenetics@bigpond.com
Merinotech WA Poll, 100081 (Unreg) 609040-2010-100081, Poll Merino	**Ian Robertson** Merinotech (WA) Ltd, RMB 311, Kojonup WA 6395 P: (08) 9833 6251, E: yarrak311@optusnet.com.au
Moojepin, 140377 504637-2014-140377, Merino	**David Thompson** PO Box 625, Katanning WA 6317 P: (08) 9821 1083, M: 0418 93 2507, E: moojepin@westnet.com.au
One Oak No. 2, R56 (Link) 503855-2010-100R56, Merino	**Graham Wells** 1763 Great Alpine Road, Smoko VIC 3741 M: 0428 44 2930, E: oneoakpl@bigpond.com
Rhamily, (Benny) 110330 601271-2011-110330, Poll Merino	**Shayne Makin** PO Box 226, Corrigin WA 6375 P: (08) 9638 1027, M: 0428 38 1027, E: kamballiems@bigpond.com
West Plains Poll, (Mercenary) 110004 601236-2011-110004, Poll Merino	**Drew Chapman** 306 Rocky Range Rd, Delegate NSW 2633 P: (02) 6458 8129, M: 0428 82 3533, E: laura.chapman1@bigpond.com
Wyambeh Poll, 140141 601343-2014-140141, Poll Merino	**Peter Campbell** Wyambeh, MS1111, Roma QLD 4455 P: (07) 4626 5454, M: 0427 19 5388, E: peter.campbell53@bigpond.com

Sire and Owner Details

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

(Unreg) Sire bred in an unregistered flock.

Sire ID provides a unique number for all sheep. A sire ID has 16 digits.
- 2 for the breed of the flock, e.g., Merino (50), Poll Merino (60), Dohne (51), SAMM (48), Afrino (AF)
- 4 for flock code, AASMB Registered flock code or unregistered code.
- 4 for year of drop.
- 6 for tag number used in the breeder's records.

† Breed of flock in which the sire was born

Manager's Report

Host Property for 2016/17 drop progeny and location

"Ridgefield'' is a 1600ha mixed enterprise farm owned and operated by The University of Western Australia. The farm is located 160 km SE of Perth, near Pingelly in The Upper Great Southern region of WA. The farm is in a Mediterranean climate with an annual rainfall of 400-425mm.

Ewe Base

The ewe base is described as a large framed, plain bodied, highly fertile animal with a moderate wool cut. Over the past five years there has been a large emphasis on genetic fat, growth and muscling while trying to maintain wool cut and micron. The 'Ridgefield' flock is stocked at 10DSE/ha and averages 5kg of 19um wool and produces weaning percentages between 100-115%.

Ewes for the project were selected from four age groups from the 'Ridgefield' commercial and Maternal Efficiency Flocks.

Joining

1368 ewes were artificially inseminated (AI) in 2016. AI was completed over four days by Allstock (WA) Pty Ltd from Narrogin, between 28th of January and 2nd of February. 15 Sires were used and the ewes average weight was 57.7 kg with an average condition score of 3.2. Sire group, ewe age, condition score and weight were evenly distributed across the four days of AI.

Pregnancy and lambing

Ewes were separated at approximately day 90 of pregnancy into two mobs of single bearing and multiple bearing ewes. Given the early rain through March/April (which followed 70mm in February), the season broke early and there was a significant amount of feed on offer. This resulted in ewes gaining weight and achieving condition score targets going into lambing.

Lambing was completed between 23rd and 30th June. Lamb survival was excellent given the favourable season and condition of the ewes. A total of 805 lambs were marked, tagged, DNA sampled, and breach and pigmentation scored on the 21st of July.

Weaning to Yearling Assessment

The good growing conditions in 2016 carried through into the spring producing an average weaning weight of 30.9 kg (Single 32.6 kg vs. Twin 28.9 kg). The F1 progeny received a Clikzin treatment in late August and were crutched mid-October. Supplementary feeding began from mid-October and consisted of oats, lupins and a mineral supplement. Body weights were measured again in late January (average 39.7 kg) which gave a growth rate of 50g/day from weaning. An additional Clikzin breach treatment was administered in February following 172mm of rain. Visual trait, mid-side, EMD and fat measurements were all completed prior to shearing, which took place on the 12th of April.

Seasonal conditions

The spring of 2015 leading into the 2016 AI program was hot and dry. Supplementary feeding of the ewes started in November given the early feed shortage. Two weeks following the 2016 AI program the farm went from experiencing 44C degree temperatures to receiving 70mm of rain over two days in combination with unseasonal cool temperatures. More rain through late March and early April saw the season break early with over 3000kg/DM of feed on offer going into lambing. The favourable conditions continued through the spring producing good weaning weights and allowing ewes to be ahead of target conditions scores before the season cut out in October. Two weeks following the 2017 AI program in February, the farm received 172mm of unseasonal rain. The early rain resulted in a germination but was followed by the one of the driest autumns on record. Supplementary feeding continues to remain high going into the 2017 lambing.

Assessment and Management Program

Activity		Date/s	Age	Wool
Selection of ewes		December 2015		
Allocation of ewes for mating		January 2016		
Pregnancy scanning		14 April 2016		
Allocated to lambing paddocks		13 June 2016		
Lambing: start – finish		23 – 30 June 2016		
Tagging, pigmentation and breech scoring		21 July 2016	24 days	
Lambing mobs boxed to one management group		10 August 2016	44 days	
Marking		10 August 2016	44 days	
Weaning		26 September 2016	91 days	
Mid side fleece sampling	P	15 March 2017	8.5 months	8.5 months
Visual trait scoring	P	15 March 2017	8.5 months	8.5 months
Shearing	P	12 April 2017	9.5 months	9.5 months
Fat and eye muscle scanning	P	27 March 2016	9 months	9 months
Worm egg count sampling		WEC not yet measured		
Body weighing	W	26 September 2016	3 months	
	P	31 January 2017	7 months	
	Y	9 May 2017	10 months	
Drench	Drenched at weaning.			
Fly treatment	Treated with Clik® at marking in August. Progeny are not mulesed. Crutched mid October. All received breech application of Clik® in February 2017 because of unseasonal rainfall.			
Supplementary feeding	Oats, lupins and mineral supplement post weaning and continuing with added hay from May 2017.			
Field day or public display of 2016 drop progeny	Field Day & Progeny Display– 4 April 2017 **Next Field Day 28 March 2018**			

Visual Trait Assessment and Site Breeding Objective

Visual trait assessment
Classer's Grade: Nathan King (MLP Classing) and Preston Clarke (AMSEA Classing)
Trait Scores: Committee/Claire Macleay

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
The sheep to be easy care based on/because of good confirmation and constitution. Medium to large frame. Bright white stylish wool free from colour and water faults. Wool cut to be sufficient to balance wool production with body size to ensure both add real value to the bottom line.

Sire Codes and Pedigrees

Sire code	Breeders flock, Sire number	Sheep Genetics ID	Sire of Sire
1	Billandri Poll, 130641	600571-2013-130641	601250-2009-907538 (Centre Plus Poll, 907538)
2	Boolading Poll, 120708	609039-2012-120708	609039-2008-080570
3	Claypans Poll, 130597	600827-2013-130597	Unknown
4	East Mundulla, (Jonty) 090137	503506-2009-090137	504470-2006-060022
5	Ejanding Poll, 145096	600443-2014-145096	600443-2012-125202
6	Haddon Rig, 2.715	500048-2012-120715	503805-2009-009778
7	Hazeldean, 11.43	500383-2011-000043	600553-2007-070002 (Coromandel Poll, ET2)
8	Ingle Poll, 130387	609154-2013-130387	609154-2011-110022
9	Leahcim Poll, 090918	600815-2009-090918	600815-2007-070319
10	Merinotech WA Poll, 100081	609040-2010-100081	609040-2008-088578
11	Moojepin, 140377	504637-2014-140377	504637-2012-120652
12	One Oak No. 2, R56	503855-2010-100R56	Unknown
13	Rhamily, (Benny) 110330	601271-2011-110330	Unknown
14	West Plains Poll, (Mercenary) 110004	601236-2011-110004	Unknown
15	Wyambeh Poll, 140141	601343-2014-140141	601343-2011-110070

Index Options

A breeding index combines multiple measured traits 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 measured and visually assessed traits is used in conjunction with an index as selection indexes assist in making balanced selection decisions.

Site Reports present 4 indexes, DP+; MP+; FP+ and WP+. These indexes are the same as MERINOSELECT indexes of that name but account for the fact that direct reproduction records have not been captured by AMSEA sire evaluation. The WP+ index was established by AMSEA and is now available as custom MERINOSELECT index

Provided is 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 uses 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 carcase 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.

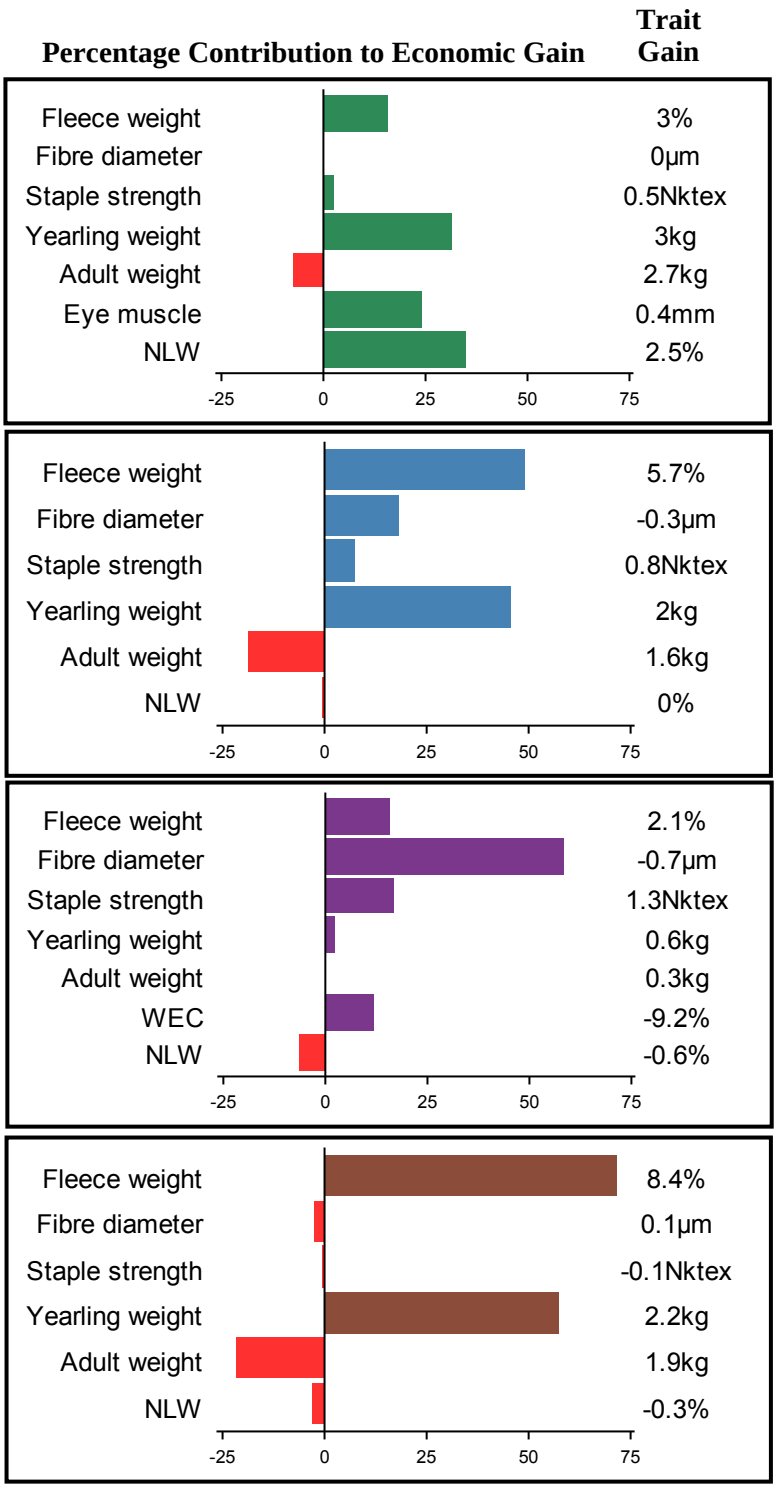


Table 1. **AMSEA Index Values and Classer's Visual Grade**

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 9) 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 at all site evaluations.

Sire Code	Breeders flock, Sire name	Number of progeny	AMSEA Index Values				Classer's Visual Grade[1]	
			Dual Purpose Plus	Merino Production Plus	Fibre Production Plus	Wool Production Plus	Tops % P^	Culls % P
1	Billandri Poll, 130641	33	104	103	Index accruacies too low to publish at this stage	102	8	-5
2	Boolading Poll, 120708	21	111	105		115	-8	12
3	Claypans Poll, 130597	13	98	102		98	1	-8
4	East Mundulla, (Jonty) 090137	29	92	103		106	-17	14
5	Ejanding Poll, 145096	34	106	108		105	-4	8
6	Haddon Rig, 2.715	19	94	98		100	-4	-1
7	Hazeldean, 11.43	22	101	109		109	6	-12
8	Ingle Poll, 130387	26	108	103		95	-7	2
9	Leahcim Poll, 090918	33	98	97		91	8	-5
10	Merinotech WA Poll, 100081	35	101	91		90	15	-12
11	Moojepin, 140377	22	98	91		94	-8	1
12	One Oak No. 2, R56	30	85	96		100	2	5
13	Rhamily, (Benny) 110330	22	112	107		107	7	-9
14	West Plains Poll, (Mercenary) 110004	28	91	96		96	13	-7
15	Wyambeh Poll, 140141	23	99	90		93	-12	17
	Average performance	**25**	**100**	**100**		**100**	**16**	**22**

^ 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)

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

Combined Measured Traits and Visual Performance

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

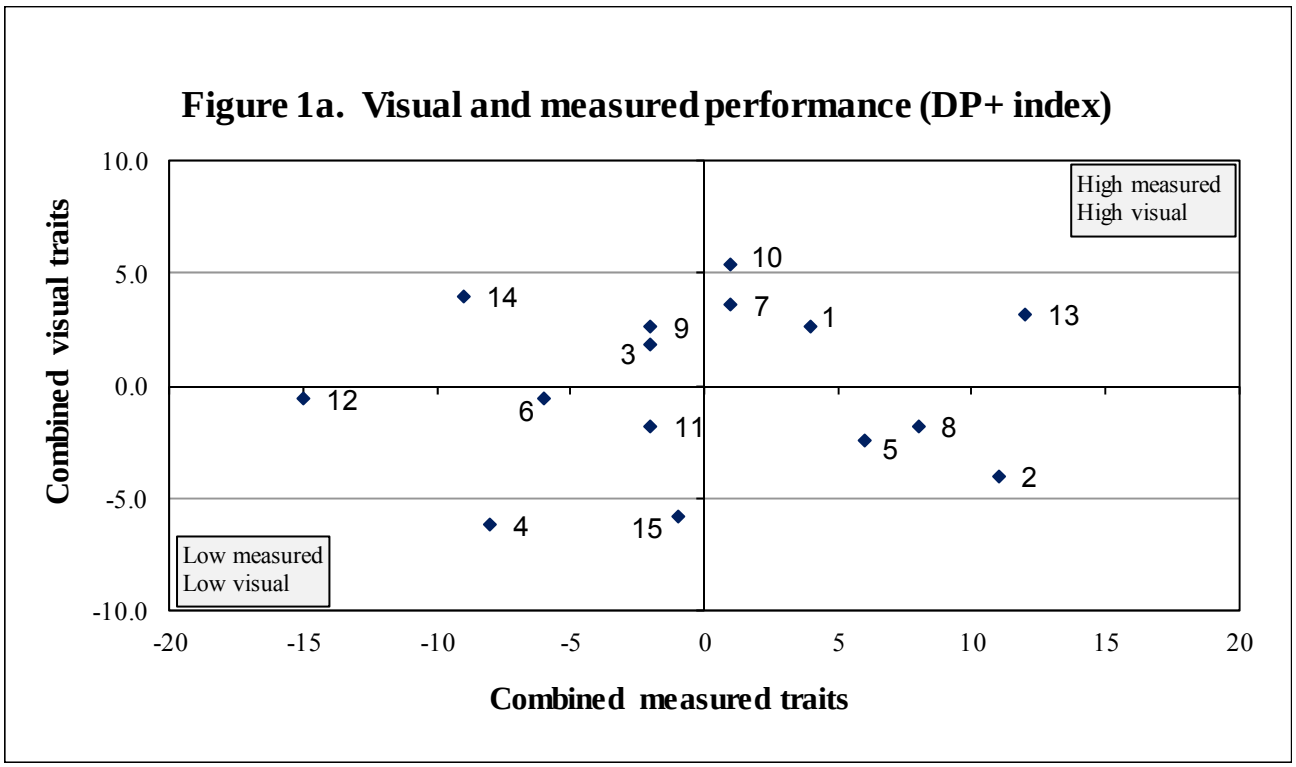


Figure 1b. Combined measured traits (MP+ index) and combined visually assessed traits for the site objective.

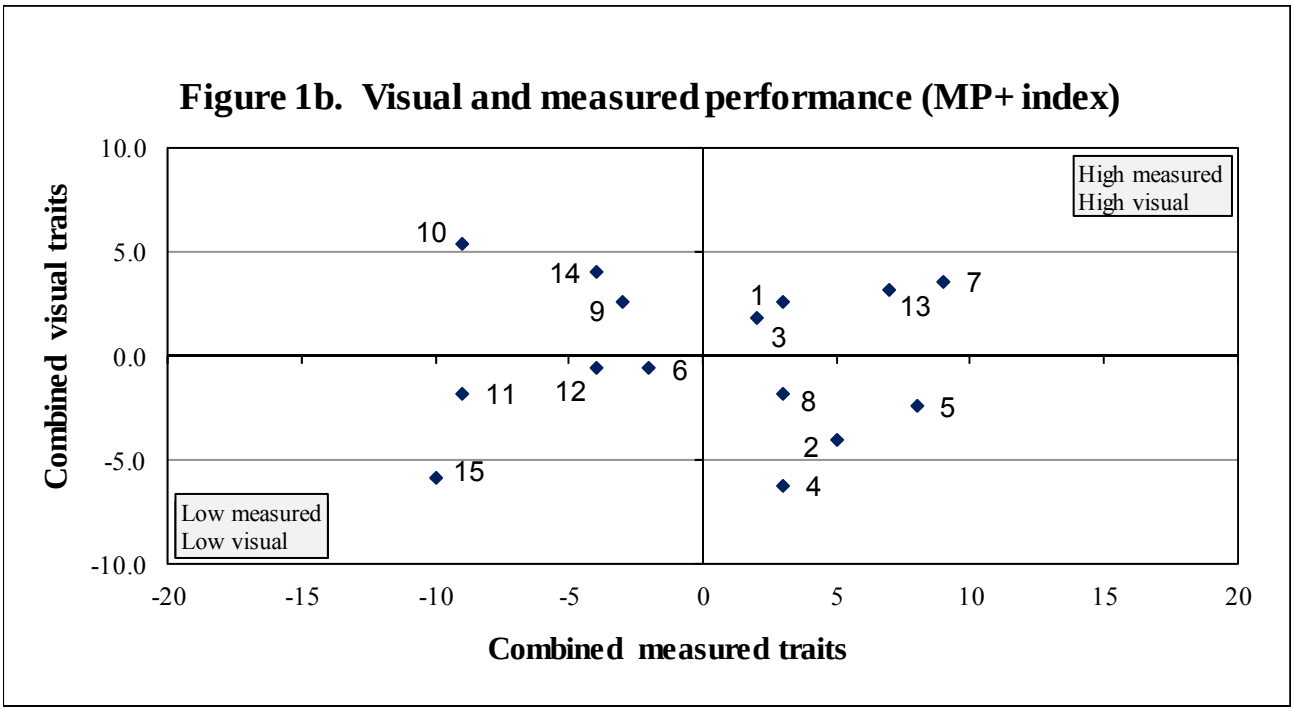
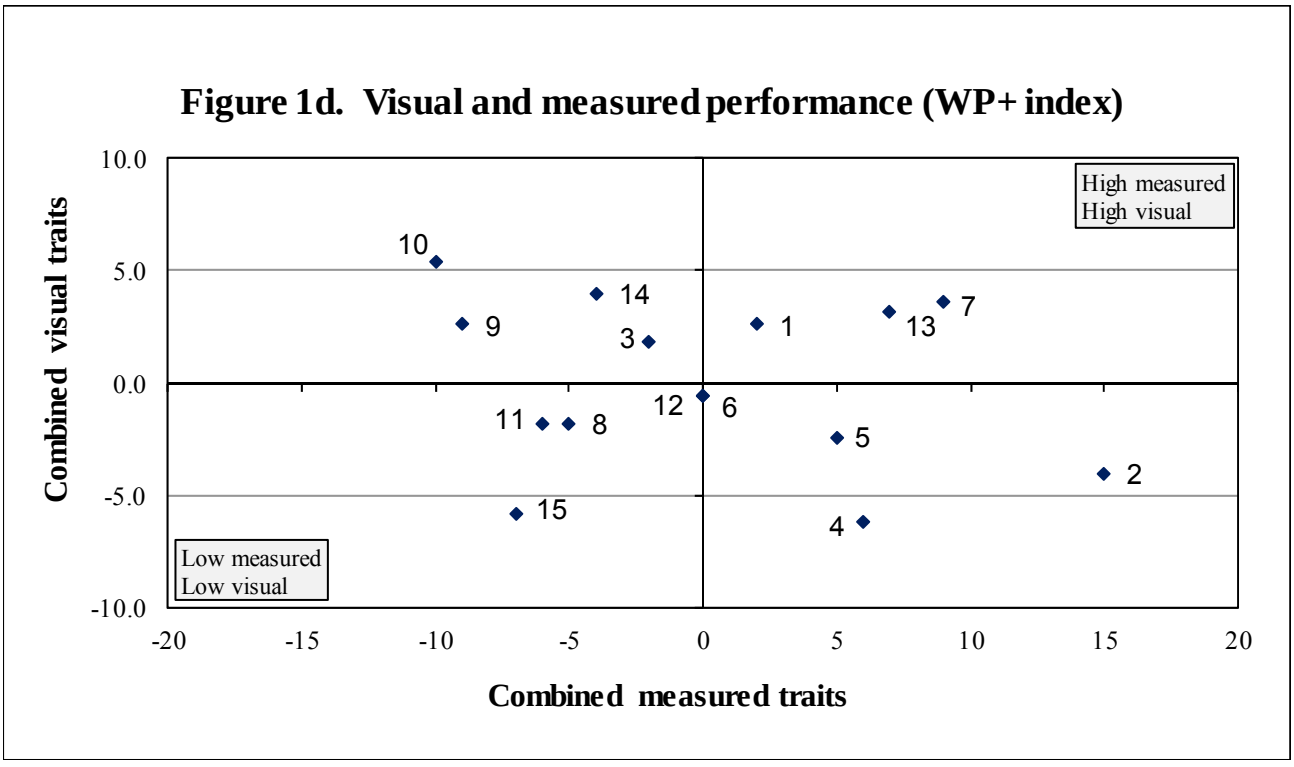


Figure 1c. Combined measured traits (FP+ index) and combined visually assessed traits for the site objective.

FP+ Index not currently available due to accuracies being too low to publish at this stage.

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



Figures 2 and 3. **Summary Graphs – FW and FD, Tops and Culls**

Figure 2. Fleece weight by 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.

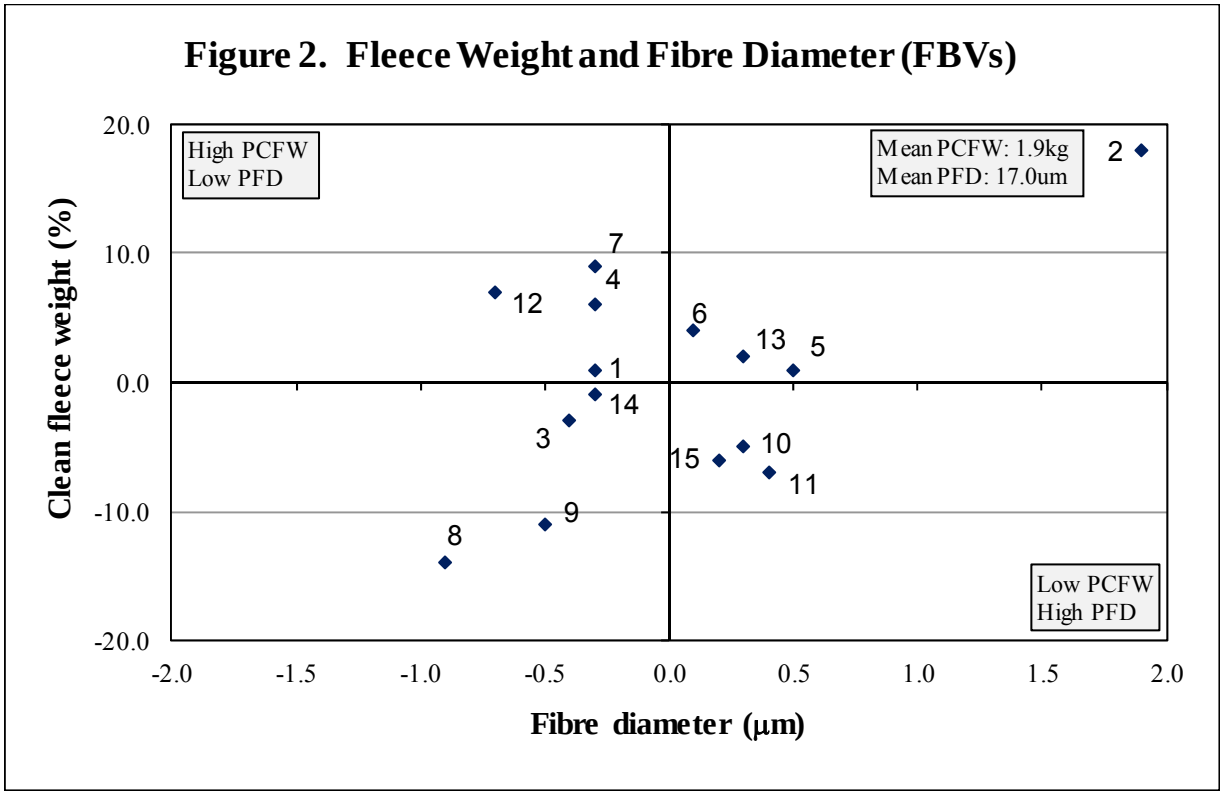
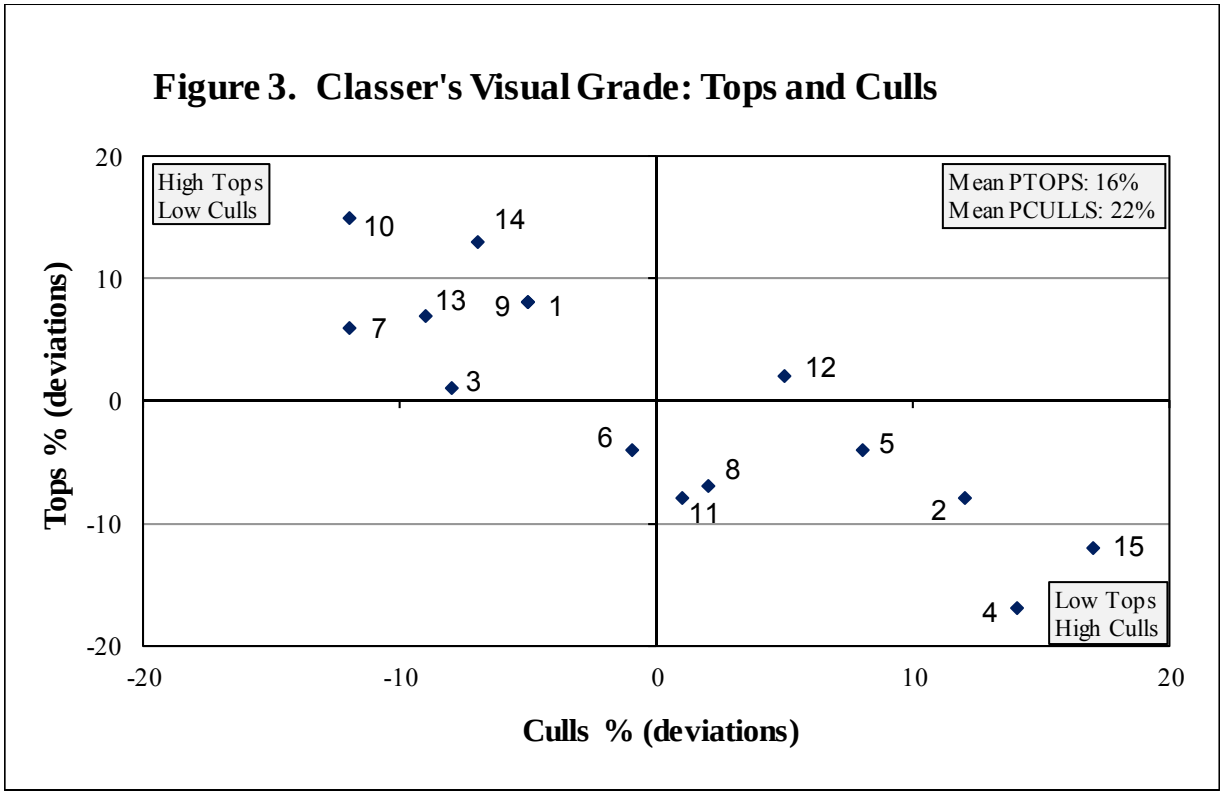


Figure 3. Classer's Visual Grade - Tops by Cull
The graph describes performance for Classer's Visual Tops Grade on the side axis and Culls Grade on the bottom axis. Sires that have above average Tops and below average Culls are in the top left hand quarter.



Figures 4 and 5. **Summary Graphs – FW and WT, FW and Fat**

Figure 4. Fleece weight by 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.

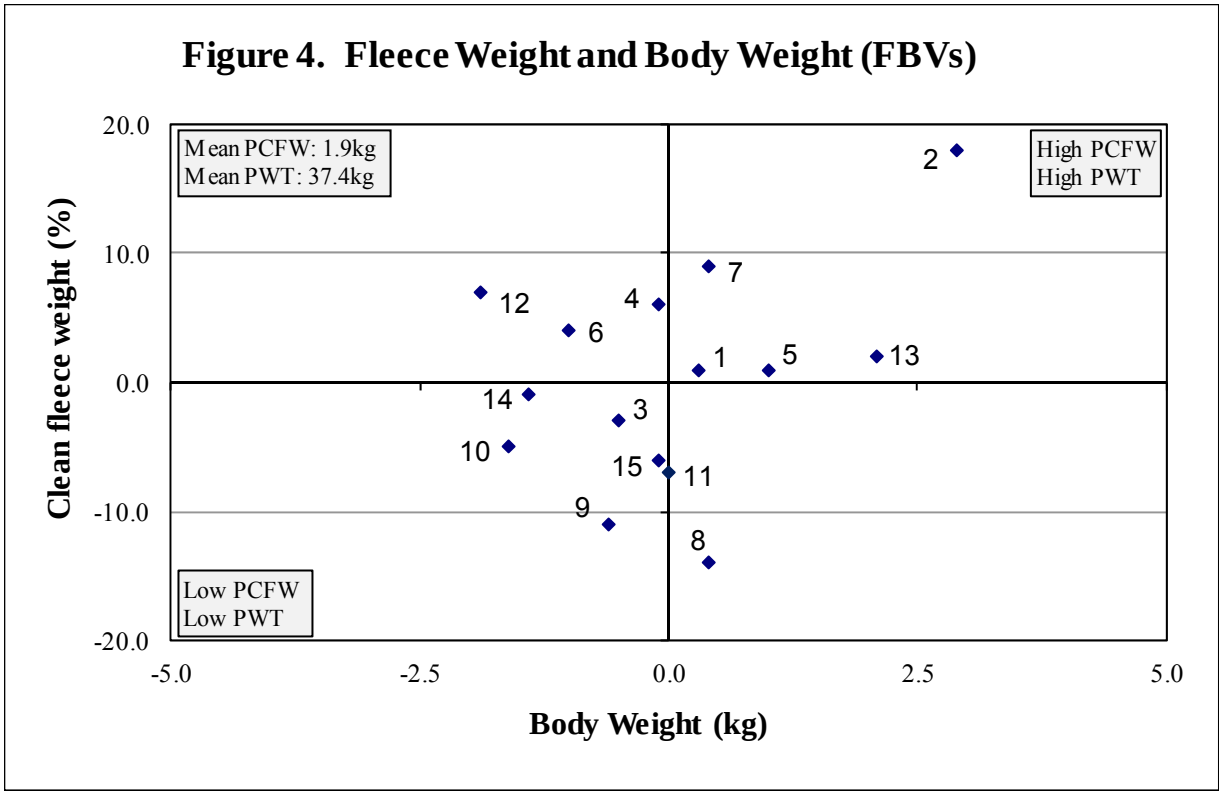
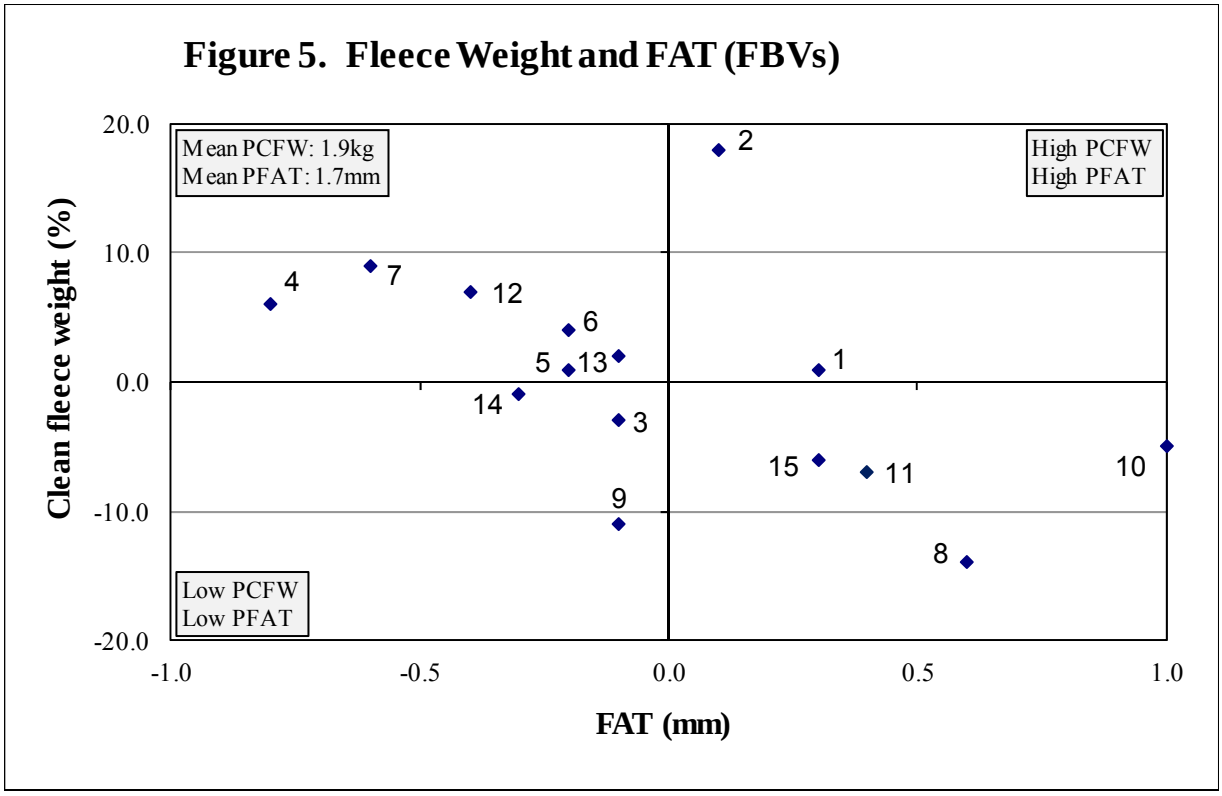


Figure 5. Fleece weight by fat (FBVs)
The graph describes performance for fleece weight on the side axis and fat depth on the bottom axis. Sires that are above average for fleece weight and above average for fat are located in the top right hand quarter.



Figures 6 and 7. **Summary Graphs – FW and EMD, WT and EMD**

Figure 6. Fleece weight by 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.

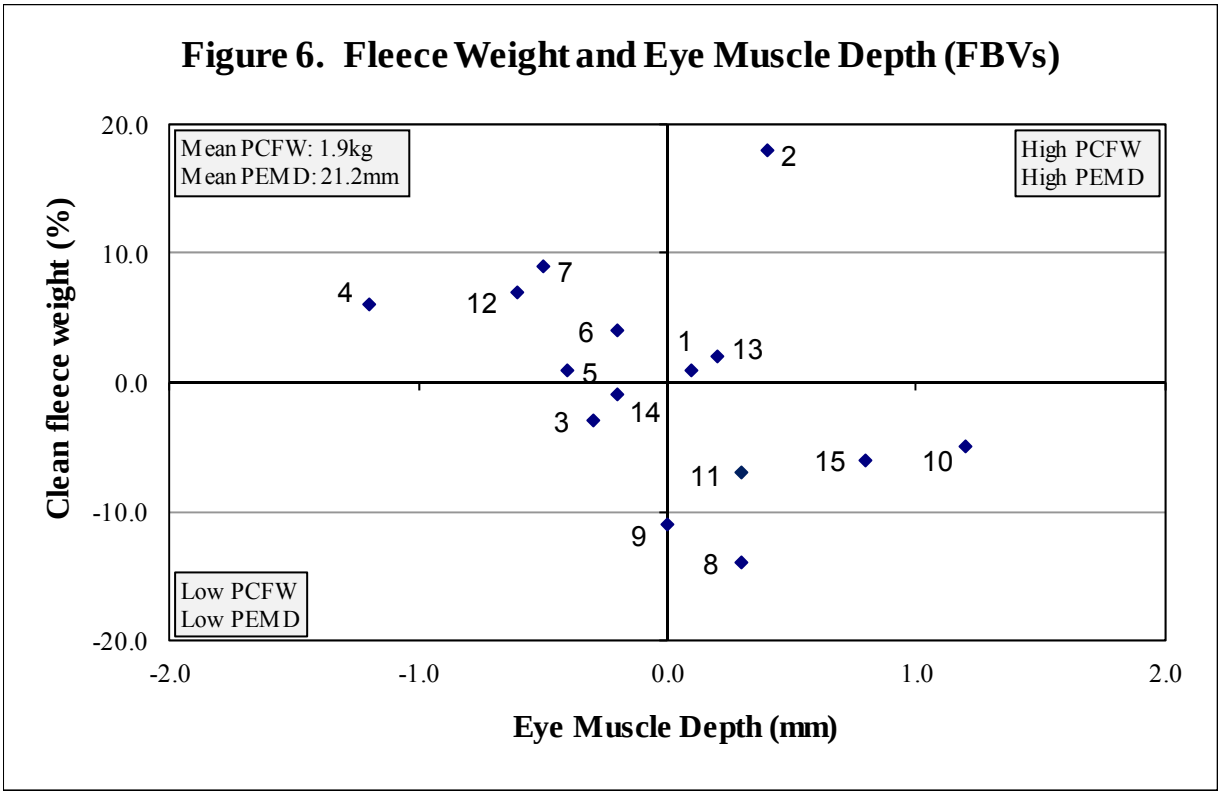
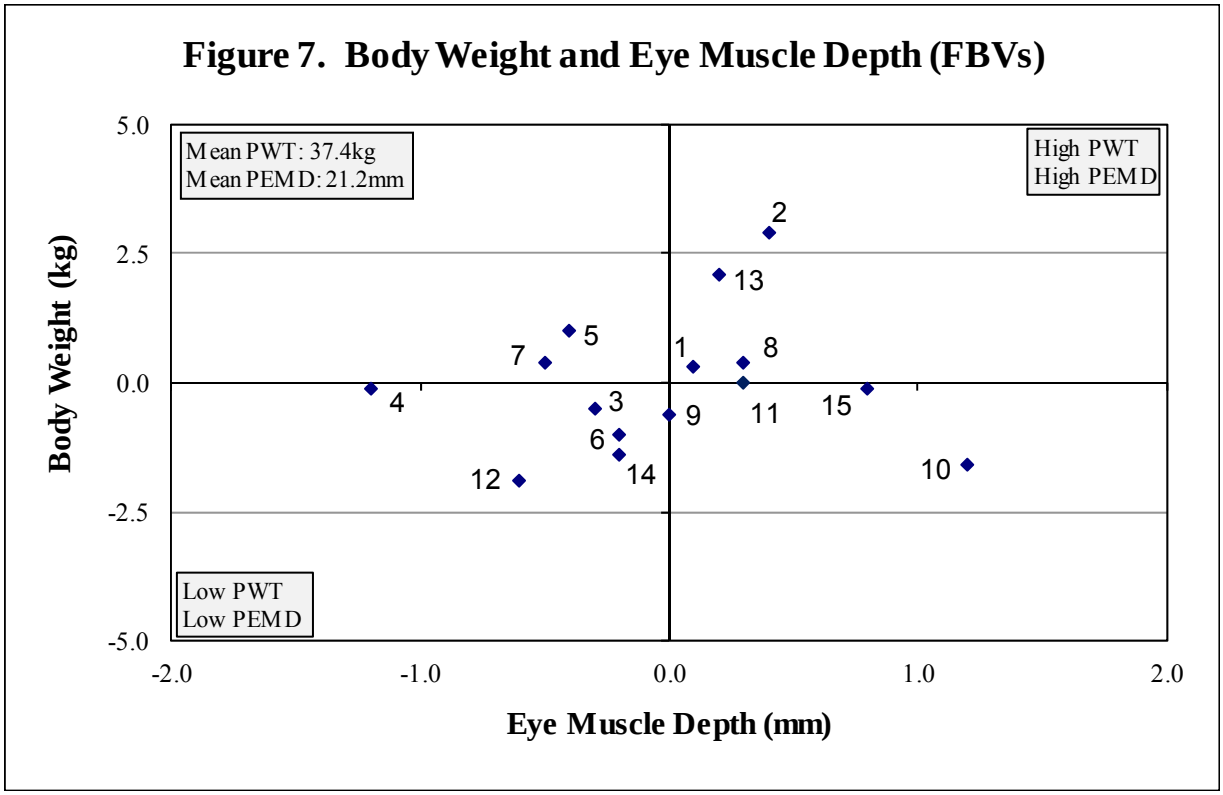


Figure 7. Body weight by eye muscle depth (FBVs)
The graph describes performance for body weight on the side axis and eye muscle depth on the bottom axis. Sires that are above average for body weight and above average for eye muscle depth are located in the top right hand quarter.



Understanding the Results

Measured trait performance and Classer's Visual Grade – Tables 2 and 3

Breeders flock, Sire number:	Identity of the breeder's flock and the sire's number or name.
Number of progeny:	The number of progeny a sire had at the most recent measured analysis. Average number of progeny is included in Table 1.
Flock Breeding Values:	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. 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.
Traits: Abbreviation, trait and the (units reported)	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).
Age at assessment:	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).
Classer's Visual Grade:	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. Page 8 provides more detail on Classer's Visual Grade and the site's Breeding Objective.

Table 2. **Major Measured Traits and Classer's Visual Grade**

Sire Code	Breeders flock, Sire name	Number of Progeny	Flock Breeding Values (deviations)						Classer's Visual Grade[1]	
			GFW	CFW	FD	WT			Tops	Culls
			%	%	µm	kg			%	%
			P^	P	P	W	P	Y	P	P
1	Billandri Poll, 130641	32	2	1	-0.3	0.3	0.3	0.5	8	-5
2	Boolading Poll, 120708	21	14	18	1.9	1.7	2.9	3.4	-8	12
3	Claypans Poll, 130597	13	-4	-3	-0.4	-0.3	-0.5	-0.4	1	-8
4	East Mundulla, (Jonty) 090137	29	5	6	-0.3	0.2	-0.1	0.0	-17	14
5	Ejanding Poll, 145096	32	-2	1	0.5	0.2	1.0	1.7	-4	8
6	Haddon Rig, 2.715	19	3	4	0.1	-0.5	-1.0	-1.4	-4	-1
7	Hazeldean, 11.43	21	7	9	-0.3	0.8	0.4	0.6	6	-12
8	Ingle Poll, 130387	26	-7	-14	-0.9	-0.3	0.4	0.8	-7	2
9	Leahcim Poll, 090918	33	-10	-11	-0.5	-0.3	-0.6	-0.8	8	-5
10	Merinotech WA Poll, 100081	33	-4	-5	0.3	-1.5	-1.6	-1.8	15	-12
11	Moojepin, 140377	22	-6	-7	0.4	-0.3	0.0	0.0	-8	1
12	One Oak No. 2, R56	28	6	7	-0.7	-0.6	-1.9	-2.8	2	5
13	Rhamily, (Benny) 110330	22	1	2	0.3	1.5	2.1	2.8	7	-9
14	West Plains Poll, (Mercenary) 110004	26	-1	-1	-0.3	-0.8	-1.4	-2.1	13	-7
15	Wyambeh Poll, 140141	23	-4	-6	0.2	0.0	-0.1	-0.8	-12	17

^ 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)

2 Classer's Visual Grade is expressed as the percentage deviation of average Tops% and Culls%.

Table 3. **Other Measured Traits**

Sire Code	Breeders flock, Sire name	Number of progeny	Flock Breeding Values (deviations)						
			FDCV % P^	SL mm	SS N/ktex	CURV deg/mm P	FAT mm P	EMD mm P	WEC %
1	Billandri Poll, 130641	32	0.2	FBVs not currently available for SS and SL		2.1	0.3	0.1	WEC not yet measured
2	Boolading Poll, 120708	21	0.3			-2.4	0.1	0.4	
3	Claypans Poll, 130597	13	-1.1			2.1	-0.1	-0.3	
4	East Mundulla, (Jonty) 090137	29	1.7			-2.5	-0.8	-1.2	
5	Ejanding Poll, 145096	32	-2.6			-3.6	-0.2	-0.4	
6	Haddon Rig, 2.715	19	0.3			-2.8	-0.2	-0.2	
7	Hazeldean, 11.43	21	0.8			0.3	-0.6	-0.5	
8	Ingle Poll, 130387	26	-1.6			6.9	0.6	0.3	
9	Leahcim Poll, 090918	33	-1.3			2.6	-0.1	0.0	
10	Merinotech WA Poll, 100081	33	-0.9			3.2	1.0	1.2	
11	Moojepin, 140377	22	0.3			-2.2	0.4	0.3	
12	One Oak No. 2, R56	28	2.9			1.9	-0.4	-0.6	
13	Rhamily, (Benny) 110330	22	-0.5			0.0	-0.1	0.2	
14	West Plains Poll, (Mercenary) 110004	26	0.5			-2.5	-0.3	-0.2	
15	Wyambeh Poll, 140141	23	0.8			-3.4	0.3	0.8	

^ 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).

Understanding the results

Visual trait performance – Tables 4a, 4b, 4c, 4d

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*

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 **1** (no fleece rot), **2 and 3** (bands of bacterial staining but no crusting), and **4 and 5** (bands of crusty fleece rot).
■ Wool colour:	Greasy wool colour scored from **1** (whitest) to **5** (yellow).
■ Wool character:	Definition and variation of crimp between and along the staple scored from **1** (well defined and regular) to **5** (undefined and large variation).
■ Dust penetration:	Degree of dust penetration from **1** (only tip <6%) to **5** (71 to 100% of staple).
■ Staple weathering:	The deterioration due to light and water from **1** (least, <6% of staple) to **5** (most, 71 to 100%) reflect the depth and degree of deterioration.
■ Staple structure:	The size and diameter of each staple from **1** (<6mm) to **5** (>30 mm).
■ Fibre pigmentation:	The percentage of dark fibres on any part of the sheep from **1** (0 pigmented fibres at any site) to **5** (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 **1** (0 pigmentation at any site) to **5** (71 to 100% pigmented area on one or more bare skin sites, **and/or** 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 **1** (no recessive markings) and **5** (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 **1** (no spot/s) and **5** (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 **1** (open face) to **5** (fully covered face).
■ Feet/Legs:	Conformation of feet and legs scored from **1** (very straight) to **5** (very angulated).
■ Body wrinkle:	The degree of body wrinkle from **1** (no wrinkle) to **5** (extensive wrinkle).
■ Jaw:	The alignment of the lower jaw and its teeth relative to the top jaw from **1** (very well aligned) to **5** (heavily undershot or overshot).
■ Back/Shoulder:	Conformation of the back and shoulder from **1** (very square) to **5** (very dipped or high).
■ Breech cover:	Size of natural bare area around the breech from **1** (large) to **5** (no bare).
■ Crutch cover:	Size of natural bare area in the pubic and groin from **1** (large) to **5** (no bare).
■ Breech wrinkle:	Degree of wrinkle at the tail set and hind legs from **1** (nil) to **5** (extensive).
■ Dag:	Degree of dag adhering to the breech and legs from **1** (nil) to **5** (extensive).
■ Urine:	Degree of urine stained wool in the breech area, including the hind legs from **1** (nil) to **5** (extensive).

Table 4a. **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.

Breeders flock, Sire name	**Wool Quality - *Post Weaning***																							
	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**
Billandri Poll, 130641	-0.1	85	15	0	0	0	0.0	3	21	76	0	0	0.1	4	42	39	15	0	-0.1	3	42	52	3	0
Boolading Poll, 120708	0.0	86	4	5	5	0	0.2	0	19	67	14	0	0.5	0	24	43	33	0	0.3	0	24	62	14	0
Claypans Poll, 130597	0.2	77	7	8	8	0	0.1	0	23	69	8	0	0.1	0	38	54	8	0	-0.1	0	62	31	7	0
East Mundulla, 090137	0.3	68	14	7	11	0	0.2	3	18	61	18	0	-0.1	11	46	32	11	0	0.0	4	46	39	11	0
Ejanding Poll, 145096	0.2	79	6	9	6	0	0.0	0	24	73	3	0	-0.4	19	48	33	0	0	0.1	0	27	70	3	0
Haddon Rig, 2.715	0.1	84	6	5	5	0	0.1	0	21	74	5	0	0.1	6	26	63	5	0	0.0	6	26	68	0	0
Hazeldean, 11.43	-0.2	95	0	5	0	0	-0.3	5	43	52	0	0	-0.2	19	24	57	0	0	-0.3	0	67	33	0	0
Ingle Poll, 130387	0.3	62	21	12	5	0	0.3	0	8	75	17	0	0.0	4	42	50	4	0	0.1	0	33	67	0	0
Leahcim Poll, 090918	-0.2	97	3	0	0	0	-0.2	6	29	65	0	0	-0.2	15	44	32	9	0	0.0	0	44	50	6	0
Merinotech WA Poll, 100081	-0.3	100	0	0	0	0	-0.1	3	37	57	3	0	0.0	6	31	60	3	0	-0.2	0	60	40	0	0
Moojepin, 140377	-0.2	95	0	5	0	0	0.0	0	32	59	9	0	0.1	9	36	41	9	5	0.5	0	14	59	27	0
One Oak No. 2, R56	0.1	79	7	7	7	0	-0.1	0	38	55	7	0	0.2	10	17	59	14	0	-0.3	0	66	34	0	0
Rhamily, 110330	0.0	86	9	0	5	0	-0.1	0	36	64	0	0	-0.3	9	55	36	0	0	-0.2	5	45	50	0	0
West Plains Poll, 110004	-0.3	100	0	0	0	0	-0.5	14	43	43	0	0	-0.4	21	43	36	0	0	-0.4	7	64	29	0	0
Wyambeh Poll, 140141	0.0	83	8	5	4	0	0.2	0	17	71	12	0	0.6	3	17	42	38	0	0.5	0	12	67	21	0
Average performance	**1.3**	**85**	**7**	**4**	**4**	**0**	**2.7**	**3**	**27**	**64**	**6**	**0**	**2.6**	**9**	**36**	**45**	**10**	**0**	**2.6**	**2**	**42**	**50**	**6**	**0**

Table 4b. **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.

Breeders flock, Sire name	Wool Quality - *Post Weaning*												Pigmentation - *Marking*											
	Staple Weathering						Staple Structure						Fibre pigmentation						Non-fibre pigmentation						Black	Spot
	Dev	1	2	3	4	5	Dev	1	2	3	4	5	Dev	1	2	3	4	5	Dev	1	2	3	4	5	5	5
Billandri Poll, 130641	-0.1	0	58	39	3	0	0.3	16	18	39	27	0	0.0	68	23	9	0	0	0.3	40	38	18	4	0	0	2
Boolading Poll, 120708	0.0	0	52	38	10	0	1.4	5	5	19	33	38	0.4	58	14	19	9	0	0.5	37	28	26	7	2	0	0
Claypans Poll, 130597	-0.2	0	69	23	8	0	-0.4	24	38	38	0	0	-0.2	93	0	7	0	0	0.1	50	37	13	0	0	0	0
East Mundulla, 090137	0.3	0	36	43	21	0	0.2	15	36	21	14	14	-0.2	88	11	1	0	0	-0.4	86	14	0	0	0	0	0
Ejanding Poll, 145096	0.3	0	30	52	18	0	-0.3	27	30	30	13	0	0.1	65	22	13	0	0	0.1	49	35	13	3	0	0	1
Haddon Rig, 2.715	0.4	0	26	53	21	0	0.4	6	37	26	26	5	0.1	61	37	2	0	0	-0.1	61	34	5	0	0	0	0
Hazeldean, 11.43	-0.2	0	67	33	0	0	-0.4	38	24	24	14	0	0.2	61	28	9	0	2	-0.1	63	30	7	0	0	0	0
Ingle Poll, 130387	0.0	0	50	42	8	0	-0.7	38	42	17	3	0	-0.2	86	14	0	0	0	-0.3	71	29	0	0	0	0	0
Leahcim Poll, 090918	-0.1	3	56	35	6	0	-0.4	35	32	21	12	0	0.1	68	24	8	0	0	-0.1	66	23	10	1	0	0	0
Merinotech WA Poll, 100081	-0.4	3	80	17	0	0	-0.2	9	51	34	6	0	0.0	71	24	5	0	0	-0.2	66	31	3	0	0	0	0
Moojepin, 140377	0.3	0	32	55	13	0	0.0	18	36	27	10	9	0.1	67	27	4	2	0	0.5	42	25	23	10	0	0	0
One Oak No. 2, R56	-0.2	0	69	28	3	0	-0.1	28	17	34	21	0	-0.1	79	16	5	0	0	-0.1	60	37	3	0	0	0	0
Rhamily, 110330	-0.1	0	64	32	4	0	-0.1	9	50	32	9	0	-0.2	90	8	2	0	0	-0.2	65	33	2	0	0	0	0
West Plains Poll, 110004	-0.3	0	71	29	0	0	-0.6	39	32	25	4	0	0.1	72	21	4	1	2	0.0	58	30	12	0	0	0	0
Wyambeh Poll, 140141	0.3	0	29	54	17	0	0.8	0	21	29	42	8	-0.1	76	22	2	0	0	0.0	49	44	7	0	0	0	0
Average performance	**2.6**	**0**	**53**	**38**	**9**	**0**	**2.5**	**20**	**31**	**28**	**16**	**5**	**1.4**	**74**	**19**	**6**	**1**	**0**	**1.6**	**58**	**31**	**9**	**2**	**0**		

Table 4c. **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.

Breeders flock, Sire name	Conformation - *Post Weaning*																											
	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
Billandri Poll, 130641	0.0	100	0	0	0	0	0.1	3	43	51	3	0	0.0	45	36	15	4	0	-0.2	71	26	3	0	0	0.1	33	67	0	0	0
Boolading Poll, 120708	0.0	100	0	0	0	0	-0.2	0	76	24	0	0	0.0	33	57	10	0	0	-0.3	76	24	0	0	0	-0.1	62	29	9	0	0
Claypans Poll, 130597	0.0	100	0	0	0	0	0.2	0	38	54	8	0	0.1	31	54	15	0	0	-0.2	69	31	0	0	0	0.1	31	69	0	0	0
East Mundulla, 090137	0.0	100	0	0	0	0	-0.1	0	61	39	0	0	0.2	24	59	17	0	0	0.1	57	29	14	0	0	0.2	34	55	11	0	0
Ejanding Poll, 145096	0.0	100	0	0	0	0	-0.1	0	67	30	0	3	-0.1	45	45	10	0	0	-0.2	70	27	3	0	0	-0.2	64	36	0	0	0
Haddon Rig, 2.715	0.0	100	0	0	0	0	0.0	0	53	47	0	0	0.4	11	74	11	4	0	0.7	32	26	37	5	0	0.0	47	47	6	0	0
Hazeldean, 11.43	0.0	100	0	0	0	0	0.0	4	48	48	0	0	-0.3	71	15	14	0	0	0.1	43	57	0	0	0	0.2	29	67	4	0	0
Ingle Poll, 130387	0.0	100	0	0	0	0	0.0	4	50	46	0	0	-0.6	88	12	0	0	0	-0.1	62	33	5	0	0	-0.2	58	42	0	0	0
Leahcim Poll, 090918	0.0	100	0	0	0	0	0.0	3	47	50	0	0	0.3	17	62	21	0	0	0.0	56	38	6	0	0	-0.4	79	21	0	0	0
Merinotech WA Poll, 100081	0.0	100	0	0	0	0	0.3	0	33	61	6	0	-0.3	63	31	6	0	0	0.0	50	50	0	0	0	0.3	20	74	6	0	0
Moojepin, 140377	0.0	100	0	0	0	0	0.0	0	50	50	0	0	-0.1	57	24	19	0	0	-0.4	86	14	0	0	0	-0.3	67	33	0	0	0
One Oak No. 2, R56	0.0	100	0	0	0	0	-0.1	0	69	28	3	0	0.4	10	62	28	0	0	0.3	41	45	7	7	0	0.6	4	72	24	0	0
Rhamily, 110330	0.0	100	0	0	0	0	-0.1	0	64	36	0	0	-0.1	55	32	9	0	4	0.0	50	50	0	0	0	0.0	41	59	0	0	0
West Plains Poll, 110004	0.1	96	0	0	0	4	0.0	0	54	46	0	0	0.4	22	44	30	4	0	0.4	32	50	14	4	0	0.2	19	81	0	0	0
Wyambeh Poll, 140141	0.0	100	0	0	0	0	0.0	8	42	50	0	0	-0.2	61	26	13	0	0	-0.4	92	4	4	0	0	-0.3	78	17	5	0	0
Average performance	**1.0**	**100**	**0**	**0**	**0**	**0**	**2.5**	**2**	**53**	**44**	**1**	**0**	**1.7**	**42**	**42**	**14**	**2**	**0**	**1.5**	**59**	**34**	**6**	**1**	**0**	**1.6**	**44**	**51**	**5**	**0**	**0**

Table 4d. **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.

Breeders flock, Sire name	Breech Visual Traits																							
	Breech Cover *Marking*						Breech Wrinkle *Marking*						Dag *Post Weaning*						Urine *Post Weaning*					
	Dev	1	2	3	4	5	Dev	1	2	3	4	5	Dev	1	2	3	4	5	Dev	1	2	3	4	5
Billandri Poll, 130641	-0.1	11	45	32	12	0	0.1	1	60	32	5	2	0.3	42	45	9	4	0	-0.1	61	39	0	0	0
Boolading Poll, 120708	-0.1	4	49	42	5	0	-0.3	14	63	23	0	0	-0.1	81	9	10	0	0	0.2	33	62	5	0	0
Claypans Poll, 130597	-0.2	10	43	47	0	0	0.6	4	23	43	30	0	0.1	62	23	15	0	0	0.1	46	54	0	0	0
East Mundulla, 090137	0.4	2	23	55	20	0	0.2	6	46	32	16	0	0.0	69	21	7	3	0	0.1	48	48	4	0	0
Ejanding Poll, 145096	-0.3	17	53	24	4	2	-0.3	10	70	20	0	0	0.0	68	26	6	0	0	0.0	56	41	3	0	0
Haddon Rig, 2.715	0.2	5	38	33	24	0	-0.1	10	57	29	4	0	0.1	63	26	11	0	0	-0.1	63	37	0	0	0
Hazeldean, 11.43	0.1	4	35	54	7	0	0.2	2	52	37	7	2	-0.1	76	14	10	0	0	-0.1	67	33	0	0	0
Ingle Poll, 130387	-0.1	4	57	34	5	0	0.0	1	68	25	4	2	0.0	69	19	12	0	0	-0.1	62	38	0	0	0
Leahcim Poll, 090918	-0.3	10	62	21	7	0	-0.5	23	75	2	0	0	-0.2	76	18	0	3	0	-0.2	74	26	0	0	0
Merinotech WA Poll, 100081	-0.1	6	47	38	9	0	0.3	2	48	38	10	2	0.1	58	31	8	3	0	0.3	47	33	20	0	0
Moojepin, 140377	-0.3	10	57	29	4	0	-0.4	20	65	15	0	0	-0.1	77	18	5	0	0	-0.4	91	9	0	0	0
One Oak No. 2, R56	0.3	2	32	49	17	0	0.3	4	38	51	7	0	0.3	53	27	20	0	0	0.0	50	50	0	0	0
Rhamily, 110330	0.1	3	37	48	12	0	0.0	8	52	38	2	0	-0.3	86	14	0	0	0	0.1	50	45	5	0	0
West Plains Poll, 110004	0.2	0	40	45	15	0	0.3	0	47	45	8	0	-0.1	75	18	7	0	0	0.1	39	61	0	0	0
Wyambeh Poll, 140141	0.0	4	49	36	11	0	-0.4	20	67	13	0	0	-0.1	74	22	4	0	0	0.1	43	57	0	0	0
Average performance	**2.5**	**7**	**44**	**39**	**10**	**0**	**2.4**	**8**	**55**	**30**	**7**	**0**	**1.4**	**69**	**22**	**8**	**1**	**0**	**1.5**	**55**	**42**	**3**	**0**	**0**

Table 5. **Sire Means for Measured Traits**

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 Table 1.

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. The **Progeny group average** listed at the bottom of the table is the actual mean of the progeny group.

Breeders flock, Sire name	Number of Progeny	Sire means for measured traits (deviations from the site mean)								
		GFW kg P^	CFW kg P	FD µm P	FDCV % P	WT kg W	WT kg P	WT kg Y	FAT mm P	EMD mm P
Billandri Poll, 130641	32	0.1	0.0	-0.2	0.2	0.3	0.0	0.5	0.1	0.1
Boolading Poll, 120708	21	0.4	0.3	1.7	0.3	0.8	2.4	2.3	0.0	0.3
Claypans Poll, 130597	13	-0.1	0.0	-0.4	-1.2	-0.3	-0.4	-1.0	0.0	-0.4
East Mundulla, (Jonty) 090137	29	0.1	0.0	-0.2	1.4	0.2	-0.1	-0.1	-0.2	-0.8
Ejanding Poll, 145096	32	-0.1	0.0	0.3	-2.3	-0.5	1.1	0.9	-0.1	-0.4
Haddon Rig, 2.715	19	0.1	0.1	0.1	0.3	-0.2	-0.9	-0.9	0.0	-0.1
Hazeldean, 11.43	21	0.2	0.1	-0.3	0.6	1.3	0.1	-0.2	-0.1	-0.4
Ingle Poll, 130387	26	0.0	-0.2	-0.8	-1.3	-0.7	0.5	1.5	0.1	0.3
Leahcim Poll, 090918	33	-0.3	-0.2	-0.4	-1.0	-0.1	-0.4	-1.2	0.0	0.0
Merinotech WA Poll, 100081	33	-0.1	0.0	0.2	-0.7	-1.4	-1.6	-1.2	0.2	0.8
Moojepin, 140377	22	-0.2	-0.2	0.3	0.4	-0.5	-0.1	0.6	0.1	0.3
One Oak No. 2, R56	28	0.2	0.1	-0.5	2.4	0.2	-1.2	-2.0	-0.1	-0.4
Rhamily, (Benny) 110330	22	0.0	0.0	0.2	-0.4	1.2	1.5	2.4	0.0	0.2
West Plains Poll, (Mercenary) 110004	26	0.0	0.0	-0.3	0.4	-0.4	-0.7	-1.2	0.0	-0.1
Wyambeh Poll, 140141	23	-0.2	-0.1	0.2	0.8	0.1	-0.3	-0.2	0.1	0.7
Progeny group average	**25**	**2.9** kg	**1.9** kg	**17.0** µm	**19.2** %	**31.0**	**37.4** kg	**39.7**	**1.7** mm	**21.2** 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)

Accuracy of Flock Breeding Values

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

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

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 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 = 119.7.0 – 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

Pingelly

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Post Weaning Assessment

Merino Lifetime Productivity Project Site