South Australian
Merino Sire Evaluation
Site Report

Within-Site Results
June 2023

2021 Drop
Yearling and Hogget Assessment

Conducted by
South Australian Merino Sire Evaluation Trial Committee

Under the auspices of

With support from

merinosa

AWI
Australian Wool Innovation Limited

Foreword

South Australia Merino Sire Evaluation

Australian Merino Sire Evaluation Association (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 carcase traits. The progeny are all run together in the same environmental conditions that typify SA Merino production with all male progeny marked. The SA site was established in 2017 and is important for South Australia's Merino industry given no other public Merino sire evaluation trials occur in SA. The site will make an important contribution to genetic improvement for Merinos in SA. Supported by Merino SA, the trial is an accredited sire evaluation program run under the rigorous design, recording and data evaluation protocols of AMSEA.

The Eckert family at Mentara Park generously hosted the 2021 Drop and are currently hosting the 2022 Drop of the SA Merino Sire Evaluation Trial. This follows Keyneton Station, Keyneton who hosted the 2017 and 2018 Drops, and the McMahan family at McPiggery Lameroo, who hosted the 2019 and 2020 Drops. There is significant interest in the site from both SA and interstate ram breeders, with the quality of rams entered of very high calibre.

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 who 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

Site Committee

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2021 Drop Yearling and Hogget Assessment

The information in this Site Report provides an update of the assessment of the 2021 drop, including the Yearling and Hogget assessments of the sire's progeny performance for measured and visually assessed traits.

The Yearling midside fleece assessments were completed at 12 months of age with 7.5 months of wool growth and shearing was completed at 13 months of age with 8.5 months of wool growth. Following shearing the wether component of the 2021 drop were sold. The ewe component had their Hogget midside fleece assessments completed at 20 months of age with 7.5 months of wool growth and shearing was completed at 20.5 months of age with 8 months of wool growth.

Visual Trait Assessment and Site Breeding Objective

Visual trait assessment
Classer's Grade: Bill Walker
Visual Trait Scores: Bill Walker

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.

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 carcase 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 25% Top, 50% Flock and 25% 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	Anderson Poll, 160729 (Link)	609147-2016-160729	Anderson Poll, 140178
2	Callowie Poll, 190055	600901-2019-190055	Callowie Poll, 170059
3	Claypans Poll, 170632 (Link)	600827-2017-170632	Old Ashrose Poll, 015445
4	Flairdale Poll, 190401	600015-2019-190401	Wallaloo Park Poll, 172003
5	Forest Springs Poll, 190193	601465-2019-190193	Mumblebone, 130850
6	Hazeldean, 002529	500383-2018-002529	Hazeldean, 000113
7	Kelvale Poll, 191148	600416-2019-191148	Kelvale Poll, 170004
8	Lorelmo Poll, 160172	600430-2016-160172	Unknown
9	Malleetech Poll, 199100	609533-2019-199100	Malleetech Poll, 177170
10	Mumblebone, 191150	500063-2019-191150	Moojepin, 120652
11	Nantoura Poll, 190061	601367-2019-190061	Sohnic, 071634
12	O'Brien Poll, 190455	601470-2019-190455	Brookdale, 014012
13	Ridgway Poll, 190240	601116-2019-190240	Gunallo, 170295
14	The Yanko, 190086	504694-2019-190086	Collinsville, 170521
15	Wallaloo Park Poll, 172032	601332-2017-172032	Moojepin, 120652

Sire and Owner Contact Details

Breeders flock, Sire name Sire ID #	Contact Details
Anderson Poll, 160729 (Link) 609147-2016-160729	**Chad Taylor** Marapana, 456 Wuuluman Road, Wellington NSW 2820 P: (02) 6845 3620, M: 0458 45 3608, E: chad@mumblebone.com.au
Callowie Poll, 190055 600901-2019-190055	**Richard Halliday** PO Box 538, Bordertown SA 5268 P: (08) 8754 6049, M: 0428 85 4759, E: callowie@bigpond.com
Claypans Poll, 170632 (Link) 600827-2017-170632	**Steven Bolt** PO Box 226, Corrigin WA 6375 M: 0427 65 2043, E: steven_bolt@hotmail.com
Flairdale Poll, 190401 600015-2019-190401	**Wayne and Matt Lehmann** PO Box 323, Tailem Bend SA 5260 P: (08) 8598 7006, M: 0408 89 6877, E: flairdale@internode.on.net
Forest Springs Poll, 190193 601465-2019-190193	**Bruce Dean** 96 Frampton Road, Joel Joel VIC 3384 M: 0407 05 4342, E: forestsprings@activ8.net.au
Hazeldean, 002529 600430-2016-160172	**James Litchfield** Myalla, P O Box 42, Cooma NSW 2630 P: (02) 6453 5567
Kelvale Poll, 191148 600416-2017-170004	**Stephen Kellock** PO Box 304, Keith SA 5267 P: (08) 8755 1761, M: 0427 43 8138, E: admin@kelvalepollmerinos.com.au
Lorelmo Poll, 160172 600430-2016-160172	**Edward Cordingley** 'Topdale', 288 Quarry Road, Walcha NSW 2354 M: 0429 48 6380, E: eddy@lorelmo.com.au
Malleetech Poll, 199100 609533-2019-199100	**David Smith** 976 Geranium South Road, Geranium SA 5301 P: (08) 8577 2216, M: 0427 58 7722, E: david@malleetech.com
Mumblebone, 191150 500063-2019-191150	**Chad Taylor** Marapana, 456 Wuuluman Road, Wellington NSW 2820 P: (02) 6845 3620, M: 0458 45 3608, E: chad@mumblebone.com.au
Nantoura Poll, 190061 601367-2019-190061	**Jed Keller** 873 Emu Springs Road, Tintinara SA 5266 M: 0427 69 1858, E: ramsgatepoll@outlook.com
O'Brien Poll, 190455 601470-2019-190455	**Darren O'Brien** PO Box 62, Kyancutta SA 5651 P: (08) 8681 2019, M: 0419 77 2173, E: dobandjodie@activ8.net.au
Ridgway Poll, 190240 601116-2019-190240	**Craig Graham** 'Glencorrie', PO Box 119, Maitland SA 5573 M: 0417 86 3672, E: cgraham@internode.on.net
The Yanko, 190086 504694-2019-190086	**Hugh, Heather and Ian Cameron** The Yanko, Jerilderie NSW 2716 P: (02) 6956 1142, M: 0427 56 1140, E: theyanko@bigpond.com
Wallaloo Park Poll, 172032 601332-2017-172032	**Trent Carter** 80 Bolangum Inn Road, Marnoo VIC 3387 M: 0427 77 6114, E: trent_carter@hotmail.com

(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.*

Link sires are a vital sire evaluation component as they provide the 'genetic link' between sire evaluation sites located across Australia, allowing all sires entered to have their performance reported relative to each other in the annual Merino Superior Sires. An AMSEA link a sire must have at least 25 progeny assessed at their 1st sire evaluation assessment.

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.

Manager's Report

Host Property and Ewe Base
Currently the Eckert family at Mentara Park are generously hosting the 2021 and 2022 Drops of the SA Merino Sire Evaluation Trial. Mentara Park receives an average of 425mm rainfall in a Winter dominant pattern. The Mentara Park ewe is purposely bred to be highly fertile, free-skinned and twice-yearly shearing capable. They have a mature weight of 70-75kg producing approximately 19 micron wool at 65-70% yield depending on the season. The ewes mated for the 2021 Drop trial were sourced primarily from a rising 3-4 year old age group and were classed prior to joining to ensure an even line.

2021 Drop Summary
The site evaluated 15 entered rams including 2 link sires. 57 ewes were joined to each sire via AI in mid-December 2020 over two days. At day 50, the ewes were scanned as pregnant with a resulting conception rate of 45% from the AI program. At this time, the ewes were separated into scanning groups of singles and multiples. Just prior to lambing, the ewes were further split into single-bearing mobs of 60 ewes, twin-bearing mobs of 35 ewes, as well as one small mob of triplet-bearing ewes. Ewes grazed barley and wheat stubbles as well as being fed supplementary silage, with grain introduced in the lead up to lambing. To avoid disturbance, ewes were not supplementary fed during the lambing period. The break in the season occurred in late May 2021.

The first cohort of lambs born from the 15 rams occurred in mid-May 2021. Lamb marking took place on June 15, 2021 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 572 progeny generated across the 15 rams. The average marking breech cover was visually assessed as 2.4 (from a range of 1-5, as per the Visual Sheep Scores publication), and the average marking breech wrinkle was visually assessed as 2.0 (from a range of 1-5, as per the Visual Sheep Scores publication). This indicates the lambs were plain. Following lamb marking, lambing mobs were boxed up again from which time the ewes and lambs resumed supplementary feeding of silage and grain. Once it became wet, supplementary feeding changed to hay and grain up until weaning.

Progeny were weaned at 13 weeks of age in mid-August 2021. Weaning weights were assessed, with an average weaning weight of 29.3kg live weight. Progeny then ran together on lucerne veldt grass based pasture. Supplementary feeding ceased at weaning and was no longer required through Summer to Winter 2022. Lambs were shorn in September 2021. Mentara Park had a good wet Winter 2021 with average rainfall which promoted adequate pasture growth. Rainfall during Spring 2021 leading into Summer 2022 was below average.

On April 22, 2022 carcase scanning traits Eye Muscle Depth and Fat were collected. The remaining major phenotyping was recorded on May 10, 2022 for the 2021 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 Classer's Visual Grade

After some delays due to wet weather, shearing was undertaken on June 13, 2022 with greasy fleece weight collected. Post shearing visual traits shoulder/back and body wrinkle were assessed June 20, 2022 with a post shearing body weight also collected. On June 23, 2022 the wether component of the 2021 drop were sold. At this time, a selected portion of the wether component were assessed for their Meat Eating Quality traits.

The Winter and Spring 2022 season was exceptional for Mentara Park. Aside from a slightly dry July 2022, although still good conditions, rain fell weekly at the host site. The remaining ewe portion of the 2021 Drop grazed ample feed of lucerne veldt based pasture grass and were very self-sufficient. The ewe cohort was crutched on October 25, 2022 at which time a hogget weight was also recorded, averaging 66.9kg liveweight at 529 days old.

The ewe cohort had their second assessment as Hoggets, with mid-side sampling and visual classing traits being collected on January 24, 2023. This was followed by shearing and post shearing visual classing traits being collected on February 3, 2023, and an off-shears weight on February 14, 2023. This marked the completion of the trial for the 2021 Drop. WEC was not collected during the course of the trial as minimum testing thresholds were not reached.

David Eckert
Mentara Park
Malinong, South Australia

Assessment and Management Program

Activity	Date/s	Age	Wool
Selection of ewes	October 11, 2020		
Allocation of ewes for mating	December 15-16, 2020		
Pregnancy scanning	February 11, 2021		
Allocated to lambing paddocks	February 11, 2021		
Lambing: start – finish	May 12 - May 18, 2021		
Lambing mobs boxed to one management group	June 15, 2021	< 4 weeks	
Tagging, pigmentation and breech scoring	June 15, 2021	< 4 weeks	
Marking	June 15, 2021	< 4 weeks	
Weaning	August 13, 2021	3 months	
Even up shearing	September 23, 2021	4 months	4 months
Crutching	March 1, 2022	9.5 months	5.5 months
Fat and eye muscle scanning (Y)	April 22, 2022	11 months	
Mid side fleece sampling (Y) **Mid side fleece sampling (H)**	May 10, 2022 January 24, 2023	12 months 20 months	7.5 months 7.5 months
Visual trait scoring (Y) **Visual trait scoring (H)**	May 10, 2022 January 24, 2023	12 months 20 months	7.5 months 7.5 months
Shearing (Y) **Shearing (H)**	June 13, 2022 Feb 3, 2023	13 months 20.5 months	8.5 months 8 months
Worm egg count	Not collected; minimum measurement threshold not reached.		
Body Weight (W) **Body Weight (P)** **Body Weight (Y)** **Body Weight (H)**	August 13, 2021 February 18, 2021 April 22, 2022 February 14, 2023	3 months 9 months 11 months 21 months	
Drench	Not required		
Fly treatment	October 15, 2021 and September 20, 2022. CLiKed on breech and down backline		
Supplementary Feeding	Following lambing, the ewes and lambs were fed hay and grain up until weaning. From this time, no further supplementary feeding was required through to the completion of the trial.		
Field day or public display	June 3, 2022		

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).

Generally, AMSEA publishes **Adjusted Sire Means**, **Flock Breeding Values** and **Indexes** in Site Reports as they offer a higher level of accuracy**.** Visual Traits were historically reported as **Raw Data**, however Adjusted Sire Means are now available for these traits and visual traits will now be presented in this format.

Raw Data

Raw data; 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, the number of progeny a sire has and management group(s).

Flock Breeding Values (FBVs)

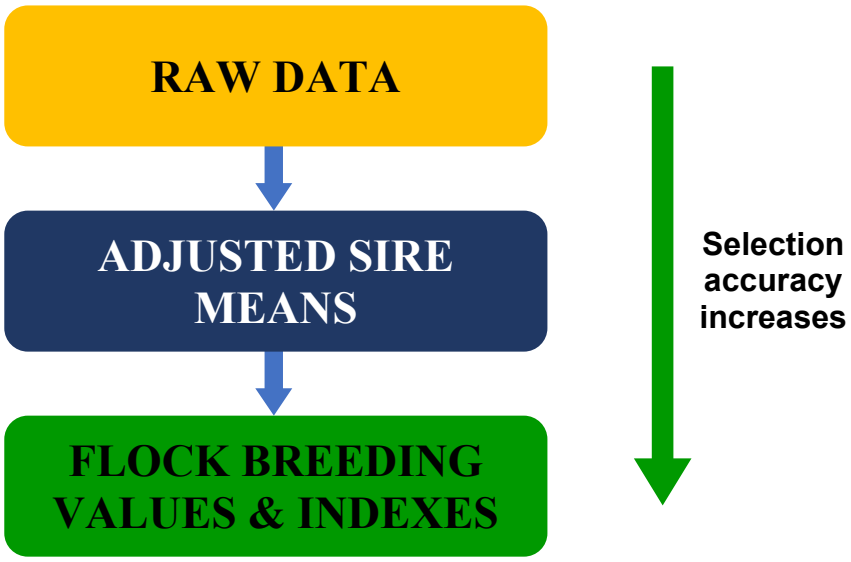
These results have been adjusted in the same way as Adjusted Sire Means, then further calculations have also been made to account for the level of heritability of a trait (some are more heritable than others) and correlations between traits.

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’.



Understanding the Results - Classer's Visual Grade & Visual Traits	
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 weaning. Average number of progeny is included.
Trait Leaders:	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.
Age at assessment:	M = Marking - 14 to 39 days (2 to 6 weeks) P = Post Weaning - 150 to 299 days (5 to 10 months) H = Hogget - 450 to 659 days (15 to 22 months) W = Weaning - 40 to 149 days (6 weeks to 5 months) Y = Yearling - 300 to 449 days (10 to 15 months) A = Adult - 660 days or older (22 months or 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 also included. Classer's Visual Grade is reported as Adjusted Sire Means; Results which have been adjusted for made for all available information on sex, birth type, rear type, age of dam, age of measurement, the number of progeny a sire has and management group(s), in order to improve the accuracy. No account is made for trait heritability or genetic correlations between traits that can further improve the accuracy. More detail on who completed the Visual Grade Classing/Scoring and the site's Breeding Objective is available earlier in this report.
Visual Traits:	The following description of trait scores is a summary of the detailed word and diagrammatical description of these scores in Version 3 (2019) of the Visual Sheep Scores booklet that is available free from AWI or at *www.merinosuperiorsires.com.au*. For the majority of breeding objectives a lower score would be considered favourable and a large difference below the average performance is preferable. *Staple structure, Jaw* and *Face* are the possible exceptions when for many breeders the optimum score is in the middle of the range therefore trait leaders are not highlighted. Visual traits are reported as reported as **Adjusted Sire Means**; Results which have been adjusted for made for all available information on sex, birth type, rear type, age of dam, age of measurement, the number of progeny a sire has and management group(s), in order to improve the accuracy. No account is made for trait heritability or genetic correlations between traits that can further improve the accuracy.
Fleece rot:	FLROT - 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:	COL - Greasy wool colour scored from **1** (whitest) to **5** (yellow).
Wool character:	CHAR - 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:	DUST - Degree of dust penetration from **1** (only tip <6%) to **5** (71 to 100% of staple).

Staple weathering:	WEATH - 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:	SSTRC - The size and diameter of each staple from **1** (<6mm) to **5** (>30 mm).
Fibre pigmentation:	FPIG - 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:	SPIG - 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 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. Only the percentage of progeny for each sire who scored 5 are reported for Recessive black and Random spot.
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.
Jaw:	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).
Feet/Legs:	LEGS - Conformation of feet and legs scored from **1** (very straight) to **5** (very angulated).
Back/Shoulder:	BACK - Conformation of the back and shoulder from **1** (very square) to **5** (very dipped or high).
Face cover:	FACE - Wool cover on the face scored from **1** (open face) to **5** (fully covered face).
Body wrinkle:	BDWR - The degree of body wrinkle from **1** (no wrinkle) to **5** (extensive wrinkle).
Breech cover:	BCOV - Size of natural bare area around the breech from **1** (large) to **5** (no bare).
Breech wrinkle:	BRWR - Degree of wrinkle at the tail set and hind legs from **1** (nil) to **5** (extensive).
Dag:	DAG - Degree of dag adhering to the breech and legs from **1** (nil) to **5** (extensive).
Crutch cover:	CCOV - Size of natural bare area in the pubic and groin from **1** (large) to **5** (no bare).
Dag:	DAG - Degree of dag adhering to the breech and legs from **1** (nil) to **5** (extensive).
Urine:	URINE - Degree of urine stained wool in the breech area, including the hind legs from **1** (nil) to **5** (extensive).

Table 1. 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 also included.

Classer's Visual Grade is reported as **Adjusted Sire Means**; Results which have been adjusted for made for all available information on sex, birth type, rear type, age of dam, age of measurement, the number of progeny a sire has and management group(s), in order to improve the accuracy. No account is made for trait heritability or genetic correlations between traits that can further improve the accuracy.

Sire Code	Breeders flock, Sire name	Number of Progeny*	Classer's Visual Grade *Yearling*	
			TOPS %	CULLS %
1	Anderson Poll, 160729 (Link)	41	-2	-12
2	Callowie Poll, 190055	31	-18	24
3	Claypans Poll, 170632 (Link)	36	-9	-8
4	Flairdale Poll, 190401	17	0	-9
5	Forest Springs Poll, 190193	45	25	-22
6	Hazeldean, 002529	42	-12	14
7	Kelvale Poll, 191148	37	25	-3
8	Lorelmo Poll, 160172	40	5	-2
9	Malleetech Poll, 199100	31	-27	30
10	Mumblebone, 191150	41	11	-12
11	Nantoura Poll, 190061	52	19	-15
12	O'Brien Poll, 190455	38	2	-1
13	Ridgway Poll, 190240	43	-13	19
14	The Yanko, 190086	24	-10	3
15	Wallaloo Park Poll, 172032	20	2	-5
	Progeny group average	**36**	**29**	**24**

These grades were collected from both the ewe and wether progeny.
***Number of progeny is as at the Yearling classing event.**

Unfortunately Classer's Visual Grade was not recorded on the ewes at Hogget age.

Table 2. Visual Traits - Wool Quality and Pigmentation

Visual traits are reported as reported as **Adjusted Sire Means**; Results which have been adjusted for made for all available information on sex, birth type, rear type, age of dam, age of measurement, the number of progeny a sire has and management group(s), in order to improve the accuracy. No account is made for trait heritability or genetic correlations between traits that can further improve the accuracy.

Sire Code	Breeders flock, Sire name	Number of Progeny	Wool Quality - *Hogget*					Pigmentation - *Marking*			
			FLROT	COL	CHAR	SSTRC	DUST	FPIG	SPIG	BLACK % Score 5	SPOT % Score 5
1	Anderson Poll, 160729 (Link)	43	1.3	2.4	2.8	3.0	1.9	1.0	1.9	0	0
2	Callowie Poll, 190055	31	1.5	2.9	2.9	4.0	1.9	1.7	2.2	0	0
3	Claypans Poll, 170632 (Link)	37	1.4	2.2	2.3	3.9	1.6	1.0	2.0	0	0
4	Flairdale Poll, 190401	17	1.5	2.0	2.5	3.4	2.1	1.0	1.9	0	0
5	Forest Springs Poll, 190193	45	1.0	1.9	2.1	3.1	1.6	1.1	1.9	0	0
6	Hazeldean, 002529	46	1.4	2.2	2.1	2.9	1.7	1.0	2.3	0	0
7	Kelvale Poll, 191148	38	1.3	2.0	2.1	3.2	2.1	1.1	2.1	0	0
8	Lorelmo Poll, 160172	43	1.6	1.8	2.2	3.2	1.8	1.0	2.1	0	0
9	Malleetech Poll, 199100	32	1.4	2.7	2.9	3.7	1.9	1.0	1.8	0	0
10	Mumblebone, 191150	42	1.4	2.1	2.3	3.1	2.1	1.1	2.4	0	2
11	Nantoura Poll, 190061	53	1.5	2.4	1.6	3.1	2.1	1.0	2.0	0	0
12	O'Brien Poll, 190455	39	1.9	2.9	1.9	3.7	1.4	1.1	2.1	0	0
13	Ridgway Poll, 190240	44	1.3	2.6	1.8	3.5	1.4	1.0	2.0	0	0
14	The Yanko, 190086	25	1.4	2.1	1.9	3.8	1.1	1.1	1.8	0	0
15	Wallaloo Park Poll, 172032	21	1.7	2.5	2.5	3.2	2.3	1.1	2.1	0	0
	Progeny group average	**37**	**1.4**	**2.3**	**2.2**	**3.3**	**1.8**	**1.1**	**2.0**	**-**	**-**

Hogget visual scores were collected from the ewe progeny only.

Table 3. Visual Traits - Conformation

Visual traits are reported as reported as **Adjusted Sire Means**; Results which have been adjusted for made for all available information on sex, birth type, rear type, age of dam, age of measurement, the number of progeny a sire has and management group(s), in order to improve the accuracy. No account is made for trait heritability or genetic correlations between traits that can further improve the accuracy.

Sire Code	Breeders flock, Sire name	Number of Progeny	Conformation - Hogget				
			JAW	LEGS	BACK	FACE	BDWR
1	Anderson Poll, 160729 (Link)	43	1.0	1.2	1.5	2.0	1.2
2	Callowie Poll, 190055	31	1.0	1.1	1.6	2.9	1.3
3	Claypans Poll, 170632 (Link)	37	1.0	1.1	1.5	2.4	1.3
4	Flairdale Poll, 190401	17	1.0	1.2	1.2	2.0	1.9
5	Forest Springs Poll, 190193	45	1.0	1.0	1.3	2.0	1.1
6	Hazeldean, 002529	46	1.0	1.2	1.3	2.6	1.0
7	Kelvale Poll, 191148	38	1.0	1.2	1.6	2.4	1.1
8	Lorelmo Poll, 160172	43	1.0	1.2	1.5	2.4	1.2
9	Malleetech Poll, 199100	32	1.0	2.5	1.4	2.9	1.3
10	Mumblebone, 191150	42	1.0	1.5	1.3	2.5	1.0
11	Nantoura Poll, 190061	53	1.0	1.1	1.7	2.1	1.1
12	O'Brien Poll, 190455	39	1.0	1.1	1.6	1.9	1.6
13	Ridgway Poll, 190240	44	1.2	1.3	1.3	2.6	1.2
14	The Yanko, 190086	25	1.0	1.0	1.4	2.7	1.5
15	Wallaloo Park Poll, 172032	21	1.0	1.0	1.5	2.3	1.3
	Progeny group average	**37**	**1.0**	**1.2**	**1.5**	**2.4**	**1.2**

Hogget visual scores were collected from the ewe progeny only.

Table 4. Visual Traits - Breech

Visual traits are reported as reported as **Adjusted Sire Means**; Results which have been adjusted for made for all available information on sex, birth type, rear type, age of dam, age of measurement, the number of progeny a sire has and management group(s), in order to improve the accuracy. No account is made for trait heritability or genetic correlations between traits that can further improve the accuracy.

Sire Code	Breeders flock, Sire name	Number of Progeny	Breech Visual Traits				
			BCOV	BRWR	DAG	CCOV	URINE
			Marking	*Marking*	*Yearling*		
1	Anderson Poll, 160729 (Link)	43	2.3	1.6	1.0	Crutch Cover not scored.	Urine not scored.
2	Callowie Poll, 190055	31	2.0	1.7	1.0		
3	Claypans Poll, 170632 (Link)	37	2.5	2.7	1.0		
4	Flairdale Poll, 190401	17	2.1	1.7	1.0		
5	Forest Springs Poll, 190193	45	2.2	2.0	1.0		
6	Hazeldean, 002529	46	2.4	2.1	1.0		
7	Kelvale Poll, 191148	38	2.8	2.0	1.1		
8	Lorelmo Poll, 160172	43	3.2	1.9	1.0		
9	Malleetech Poll, 199100	32	2.1	2.2	1.0		
10	Mumblebone, 191150	42	1.9	2.0	1.0		
11	Nantoura Poll, 190061	53	2.5	2.0	1.0		
12	O'Brien Poll, 190455	39	2.5	1.8	1.0		
13	Ridgway Poll, 190240	44	2.3	1.5	1.0		
14	The Yanko, 190086	25	2.8	2.6	1.0		
15	Wallaloo Park Poll, 172032	21	2.4	2.0	1.0		
	Progeny group average	**37**	**2.4**	**2.0**	**1.0**	**-**	**-**

These visual scores were collected from both ewe and wether progeny.

Understanding the Results - Measured Traits	
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 weaning. Average number of progeny is included.
Trait Leaders:	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)	Measured traits are those assessed via a standardised collection and testing process completed by an independent, accredited and recognised service provider. Measured traits include the following: GFW: Greasy fleece weight (percentage) CFW: Clean fleece weight (percentage) FD: Average fibre diameter (micron) FDCV: Fibre diameter coefficient of variation (percentage) SL: Staple length (mm) at the mid-side SS: Staple strength (N/ktex) at the mid-side CURV: Fibre curvature (degrees) WT: Body weight (kilograms) EMD: Eye muscle depth (mm) at the 'C' site FAT: Fat depth (mm) at the 'C' site WEC: Worm egg count (% deviation in worm burden of sire's progeny)
Age at assessment:	M = Marking - 14 to 39 days (2 to 6 weeks) W = Weaning - 40 to 149 days (6 weeks to 5 months) P = Post Weaning - 150 to 299 days (5 to 10 months) Y = Yearling - 300 to 449 days (10 to 15 months) H = Hogget - 450 to 659 days (15 to 22 months) A = Adult - 660 days or older (22 months or older)
Adjusted Sire Means	Sire means are the average performance of all the progeny of a sire adjusted for the progeny's birth type, rear type, age of dam, management group and the number of progeny a sire has in the analysis. Adjustments improve the accuracy of the result and adjustments are based on the actual influence of these factors on the drop. No account is made for trait heritability and genetic correlations between traits. The overall progeny group mean is also reported.
Flock Breeding Values (FBVs)	FBVs are deviations from the average ie. negative values are below average, positives are above. FBVs presented are calculated from data recorded within-site and within-drop and express the expected genetic performance 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 the association between traits, the heritability of the trait, and non-genetic affects such as birth and rear type, sex, and the number of progeny a sire has in the analysis. Adult FBVs are calculated using all measured assessments up to the current stage. As further assessments are completed, breeding values at earlier stages are also subject to change. For more information: www.merinosuperiorsires.com.au/resources.
Indexes	The indexes reported are based on measured traits FBV performance with varying emphasis on fleece weight, fibre diameter, body weight, staple strength and worm egg count. The indexes reported 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 are not currently collected as part of standard sire evaluation trials. The WP+ index is unique to AMSEA. Further information about Indexes is available later in this report and at www.merinosuperiorsires.com.au/resources.

Table 5. Adjusted Sire Means - Wool

Sire Code	Breeders flock, Sire name	Number of Progeny	Adjusted Sire Means										
			GFW kg		CFW kg		FD µm		FDCV %		SL mm	SS N/ktex	CURV deg/mm
			Y	H	Y	H	Y	H	Y	H	Y	Y	Y
1	Anderson Poll, 160729 (Link)	43	5.2	5.1	3.1	3.3	18.7	19.8	15.0	15.3	89.4	49.2	74.0
2	Callowie Poll, 190055	31	5.4	5.5	3.3	3.6	18.7	20.9	16.7	17.4	86.4	45.0	70.3
3	Claypans Poll, 170632 (Link)	37	5.6	5.4	3.4	3.5	17.9	19.7	15.6	15.0	82.1	43.9	77.3
4	Flairdale Poll, 190401	17	5.9	5.7	3.6	3.7	19.2	20.2	15.7	16.2	91.6	51.0	73.5
5	Forest Springs Poll, 190193	45	5.4	5.5	3.3	3.6	18.6	19.6	15.6	15.2	91.4	43.9	72.4
6	Hazeldean, 002529	46	5.3	5.3	3.2	3.5	18.1	19.4	15.4	15.2	83.8	45.1	79.4
7	Kelvale Poll, 191148	38	5.4	5.3	3.2	3.5	18.6	20.6	15.4	15.3	93.8	43.2	68.8
8	Lorelmo Poll, 160172	43	5.1	5.2	3.1	3.4	17.4	18.6	16.9	16.1	88.6	43.3	73.0
9	Malleetech Poll, 199100	32	5.7	5.7	3.5	3.8	19.2	21.1	15.4	15.7	86.1	50.7	74.8
10	Mumblebone, 191150	42	5.1	4.9	3.1	3.3	18.4	19.8	15.8	16.0	93.7	41.4	71.2
11	Nantoura Poll, 190061	53	5.2	5.0	3.1	3.2	18.7	19.5	15.2	15.1	93.4	46.8	68.9
12	O'Brien Poll, 190455	39	5.7	5.4	3.4	3.6	18.3	19.3	14.7	15.2	88.1	49.9	74.2
13	Ridgway Poll, 190240	44	5.4	5.3	3.2	3.5	18.6	20.4	15.3	15.7	84.4	47.3	73.6
14	The Yanko, 190086	25	5.8	5.5	3.6	3.6	17.6	18.9	16.9	17.1	86.1	38.9	72.8
15	Wallaloo Park Poll, 172032	21	5.3	5.1	3.2	3.4	17.6	19.4	16.5	16.0	85.9	43.8	75.5
	Progeny group average	**37**	**5.4**	**5.3**	**3.3**	**3.5**	**18.4**	**19.8**	**15.7**	**15.7**	**88.5**	**45.5**	**73.2**
			kg		kg		µm		%		mm	N/ktex	deg/mm

These Adjusted Sire Means were calculated using data from both ewe and wether progeny for the Yearling measurements and only the ewe progeny for the Hogget measurements.

Table 6. Adjusted Sire Means - Weight and Carcase

Sire Code	Breeders flock, Sire name	Number of Progeny	Adjusted Sire Means					
			WT kg				EMD mm	FAT mm
			W	P	Y	H	Y	Y
1	Anderson Poll, 160729 (Link)	43	30.0	56.5	61.0	70.8	34.6	4.3
2	Callowie Poll, 190055	31	29.0	53.6	57.4	68.3	33.4	3.8
3	Claypans Poll, 170632 (Link)	37	30.1	52.2	55.7	65.5	32.4	3.6
4	Flairdale Poll, 190401	17	30.8	56.0	58.4	66.5	34.0	4.1
5	Forest Springs Poll, 190193	45	30.0	56.2	60.0	68.8	33.8	4.3
6	Hazeldean, 002529	46	29.4	53.1	57.2	67.2	33.0	3.9
7	Kelvale Poll, 191148	38	29.9	53.9	57.9	66.0	33.8	3.6
8	Lorelmo Poll, 160172	43	26.5	48.9	53.0	59.7	32.7	3.6
9	Malleetech Poll, 199100	32	29.5	52.6	57.5	66.5	34.0	4.1
10	Mumblebone, 191150	42	28.8	52.9	57.9	66.5	34.2	4.3
11	Nantoura Poll, 190061	53	28.8	52.3	56.7	66.6	33.8	4.2
12	O'Brien Poll, 190455	39	30.8	57.8	60.8	69.6	34.5	4.1
13	Ridgway Poll, 190240	44	27.6	52.2	56.8	67.7	32.8	4.0
14	The Yanko, 190086	25	30.6	52.8	56.5	64.3	32.7	3.6
15	Wallaloo Park Poll, 172032	21	29.1	55.0	58.5	71.6	34.5	3.8
	Progeny group average	**37**	**29.3**	**53.6**	**57.7**	**66.8**	**33.6**	**4.0**
			kg				mm	mm

These Adjusted Sire Means were calculated using data from both ewe and wether progeny for the Weaning, Post Weaning and Yearling measurements and only the ewe progeny for the Hogget measurements.

Table 7. Flock Breeding Values - Wool

Sire Code	Breeders flock, Sire name	Number of Progeny	Flock Breeding Values (deviations)										
			GFW %		CFW %		FD µm		FDCV %		SL mm	SS N/ktex	CURV deg/mm
			Y	H	Y	H	Y	H	Y	H	Y	Y	Y
1	Anderson Poll, 160729 (Link)	43	-9	-7	-12	-12	0.5	0.3	-1.5	-1.1	1.7	6.2	2.2
2	Callowie Poll, 190055	31	0	3	2	3	0.6	1.3	1.6	1.6	-2.7	-0.5	-4.4
3	Claypans Poll, 170632 (Link)	37	4	3	5	4	-0.6	-0.3	-0.2	-1.1	-10.4	-1.9	6.5
4	Flairdale Poll, 190401	17	12	10	12	8	1.0	0.9	0.0	0.3	4.5	6.2	-1.1
5	Forest Springs Poll, 190193	45	3	7	3	7	0.4	0.0	-0.2	-0.4	5.3	-3.0	-2.2
6	Hazeldean, 002529	46	-5	-5	-4	-5	-0.5	-0.5	-0.4	-0.5	-7.9	-0.9	10.6
7	Kelvale Poll, 191148	38	-2	-2	-2	-2	0.5	0.9	-0.6	-0.6	9.1	-3.2	-7.5
8	Lorelmo Poll, 160172	43	-9	-6	-10	-7	-1.6	-1.9	1.6	1.5	0.0	-3.8	-0.1
9	Malleetech Poll, 199100	32	9	11	10	14	1.2	1.8	-0.4	-0.5	-3.6	7.3	2.1
10	Mumblebone, 191150	42	-8	-11	-7	-9	0.2	0.0	0.0	-0.2	8.9	-6.0	-3.7
11	Nantoura Poll, 190061	53	-6	-7	-10	-11	0.6	0.0	-1.0	-0.6	9.1	1.9	-7.5
12	O'Brien Poll, 190455	39	7	4	7	5	-0.3	-0.7	-1.4	-0.7	-0.2	6.0	1.3
13	Ridgway Poll, 190240	44	-1	-2	-3	-2	0.3	0.4	-0.5	-0.3	-6.2	3.0	1.2
14	The Yanko, 190086	25	9	9	11	10	-1.2	-1.0	2.0	1.9	-3.4	-8.5	-1.3
15	Wallaloo Park Poll, 172032	21	-5	-6	-3	-3	-1.2	-1.1	1.0	0.8	-4.0	-2.9	3.9

Flock Breeding Values are calculated using all available data from both ewes and wethers.

Table 8. Flock Breeding Values - Weight, Carcase and WEC

Sire Code	Breeders flock, Sire name	Number of Progeny	Flock Breeding Values (deviations)						
			WT kg				EMD mm	FAT mm	WEC %
			W	P	Y	H	Y	Y	
1	Anderson Poll, 160729 (Link)	43	0.6	2.6	3.8	2.5	0.0	0.4	*Not assessed as minimum threshold not yet met.*
2	Callowie Poll, 190055	31	-0.7	-0.3	0.3	1.4	0.0	-0.3	
3	Claypans Poll, 170632 (Link)	37	0.6	-1.4	-2.6	-0.6	-1.0	-0.8	
4	Flairdale Poll, 190401	17	2.4	2.3	1.3	0.8	0.2	0.1	
5	Forest Springs Poll, 190193	45	2.4	3.5	4.2	4.7	-0.6	0.6	
6	Hazeldean, 002529	46	-0.7	-1.1	-1.5	-2.3	-0.7	-0.1	
7	Kelvale Poll, 191148	38	0.3	0.3	0.1	-0.9	0.2	-0.8	
8	Lorelmo Poll, 160172	43	-4.9	-5.6	-7.1	-7.7	0.6	-0.3	
9	Malleetech Poll, 199100	32	0.3	-0.8	-0.3	1.0	0.8	0.4	
10	Mumblebone, 191150	42	0.1	0.0	1.0	1.3	0.7	1.0	
11	Nantoura Poll, 190061	53	-1.2	-1.3	-1.8	-3.7	0.7	0.7	
12	O'Brien Poll, 190455	39	2.3	3.8	3.9	3.4	0.2	0.0	
13	Ridgway Poll, 190240	44	-2.5	-1.6	-1.0	-0.7	-0.9	0.2	
14	The Yanko, 190086	25	1.4	-0.6	-1.5	-1.9	-1.0	-0.9	
15	Wallaloo Park Poll, 172032	21	-0.5	0.3	1.1	2.6	0.8	-0.3	

Flock Breeding Values are calculated using all available data from both ewes and wethers.

MERINOSELECT Indexes

A guide from Sheep Genetics

Why use a selection index?

Indexes are an important tool to drive genetic improvement in ram breeding programs. Each index combines multiple measured traits, or breeding values, into a single value that reflects a certain production emphasis on these traits. A range of traits are included which are of economic or functional importance. Collectively, these traits make up the "breeding objective" of the index which aims to improve profitability in commercial sheep enterprises.

Indexes are useful because they balance genetic improvement appropriately across a range of traits with the emphasis of each individual trait determined by it's relative importance to a selection approach for a particular style of production system.

> **"** Appropriately designed indexes are central to the goal of breeding more profitable sheep.

However, it is recommended that the performance of individual measured and visually assessed traits also be used in conjunction with indexes.

Choosing the right index

This report includes four indexes based on four commercial production systems, these are outlined in the figure below.

The Sheep Genetics website gives further index descriptions and explains that there are 'base' and 'plus' levels for each index with the latter including the breeding values of additional traits. Sires reported within this document have accurate breeding values for these additional traits and so the plus indexes are reported; DP+, MP+, FP+ and WP+.

Dual Purpose (DP+)

Income is a balance of wool from breeding ewes and meat production from lambs by Merino and terminal sires.

Merino Production (MP+)

Income is a balance of wool and surplus Merino sheep sales with balanced improvement of fleece weight and fibre diameter.

Fibre Production (FP+)

Income is mainly from the wool clip with a focus on superior wool quality through improving fibre diameter, CV and staple strength.

Wool Production (WP+)

Income is a balance of wool and surplus Merino sheep sales with greater emphasis on increasing fleece weight.

> **"** When selecting on these indexes the long-term responses will vary depending on the traits measured, available pedigree, use of genomics, flock structure and selection emphasis on the index.

The changes in individual traits from using an index depend on the information you record in your flock. If you want to improve, or even just maintain a trait, you must record it to ensure breeding values are sufficiently accurate for the index to do its job.

For detailed explanations and further information on indexes visit:

www.sheepgenetics.org.au

Sheep Genetics have resources available for both ram breeders and ram buyers.

Table 9. AMSEA Indexes

The indexes reported 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 are not currently collected as part of standard sire evaluation trials. The WP+ index is unique to AMSEA. Further information about Indexes is available earlier in this report and at www.merinosuperiorsires.com.au/resources. The average value for all indexes is 100.

Sire Code	Breeders flock, Sire name	Number of Progeny	AMSEA Index Values			
			Dual Purpose Plus	Merino Production Plus	Fibre Production Plus	Wool Production Plus
1	Anderson Poll, 160729 (Link)	43	107	95	98	90
2	Callowie Poll, 190055	31	100	97	91	103
3	Claypans Poll, 170632 (Link)	37	86	108	105	107
4	Flairdale Poll, 190401	17	113	115	109	116
5	Forest Springs Poll, 190193	45	108	108	102	112
6	Hazeldean, 002529	46	86	93	97	91
7	Kelvale Poll, 191148	38	88	81	80	87
8	Lorelmo Poll, 160172	43	86	85	101	79
9	Malleetech Poll, 199100	32	116	116	109	118
10	Mumblebone, 191150	42	92	79	80	84
11	Nantoura Poll, 190061	53	89	77	88	76
12	O'Brien Poll, 190455	39	130	130	127	122
13	Ridgway Poll, 190240	44	92	100	101	99
14	The Yanko, 190086	25	90	107	103	111
15	Wallaloo Park Poll, 172032	21	116	110	108	106

Indexes are calculated using all available data from both ewes and wethers.

Combined Measured Traits and Visual Performance

The following figures use the same sire codes as Table 2 to locate sire performance for a variety of trait combinations. The blue boxes describe the high and low performance quadrants of results for the traits, as does any text accompanying the figure.

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

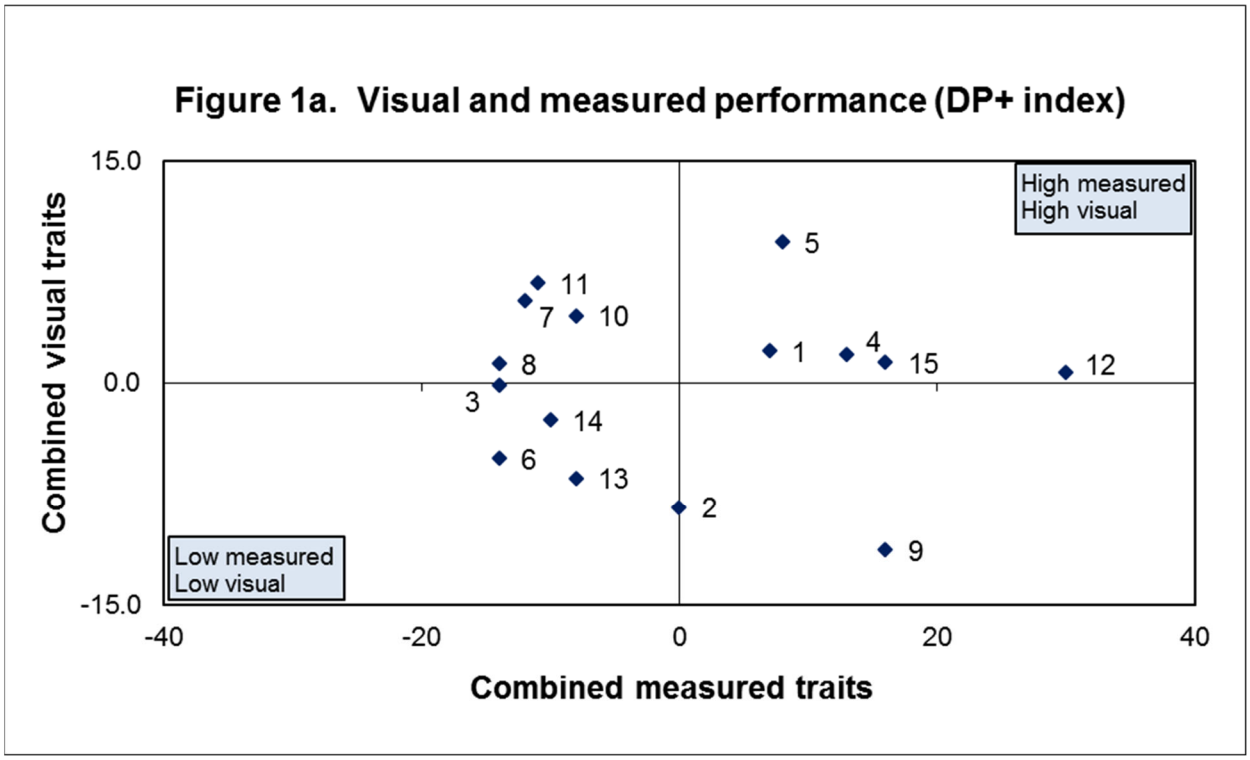


Figure 1b. Combined measured traits (MP+ index) and combined visually assessed traits for the site objective.

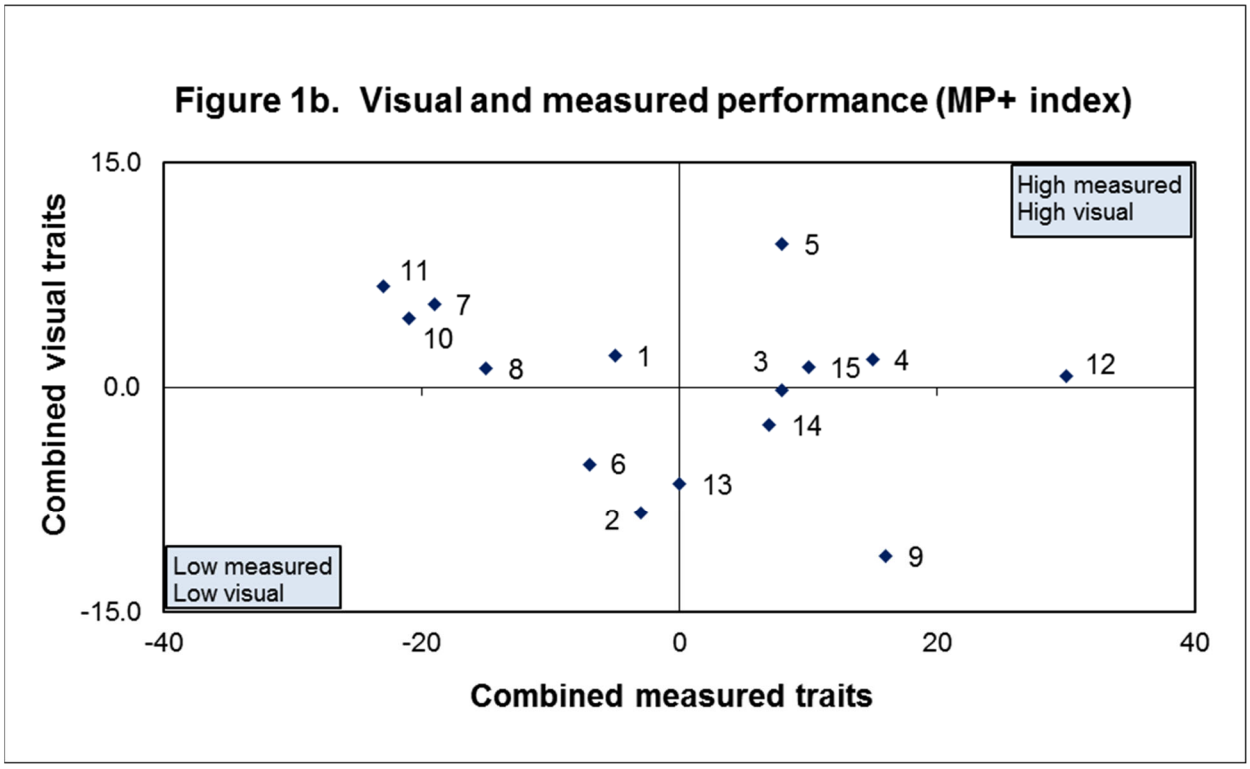


Figure 1c. Combined measured traits (FP+ index) and combined visually assessed traits for the site objective.

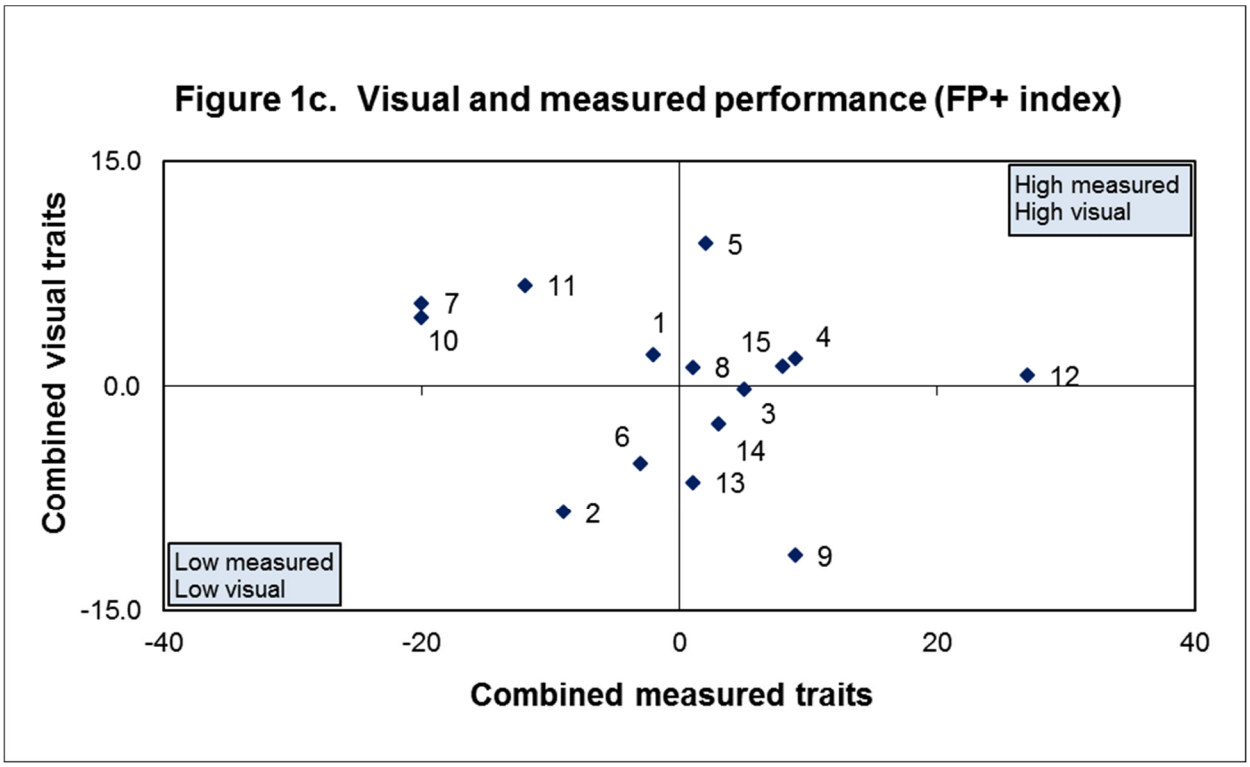
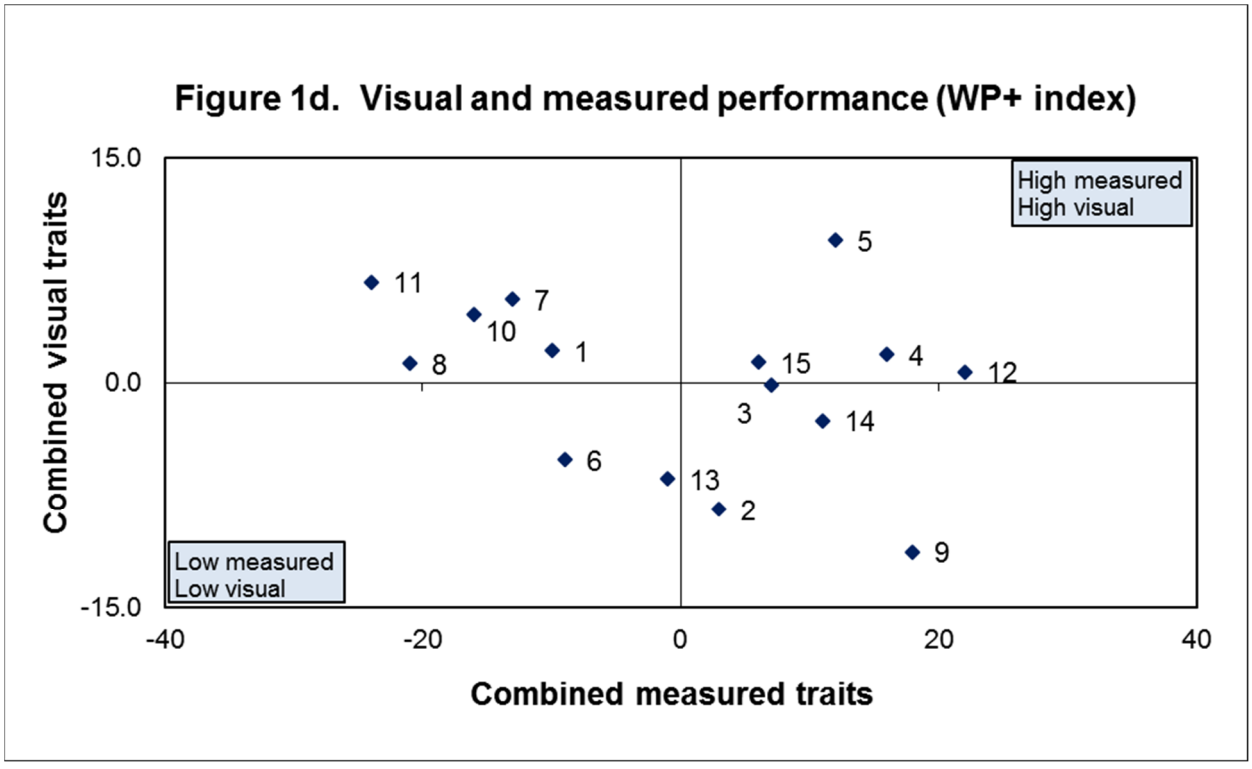


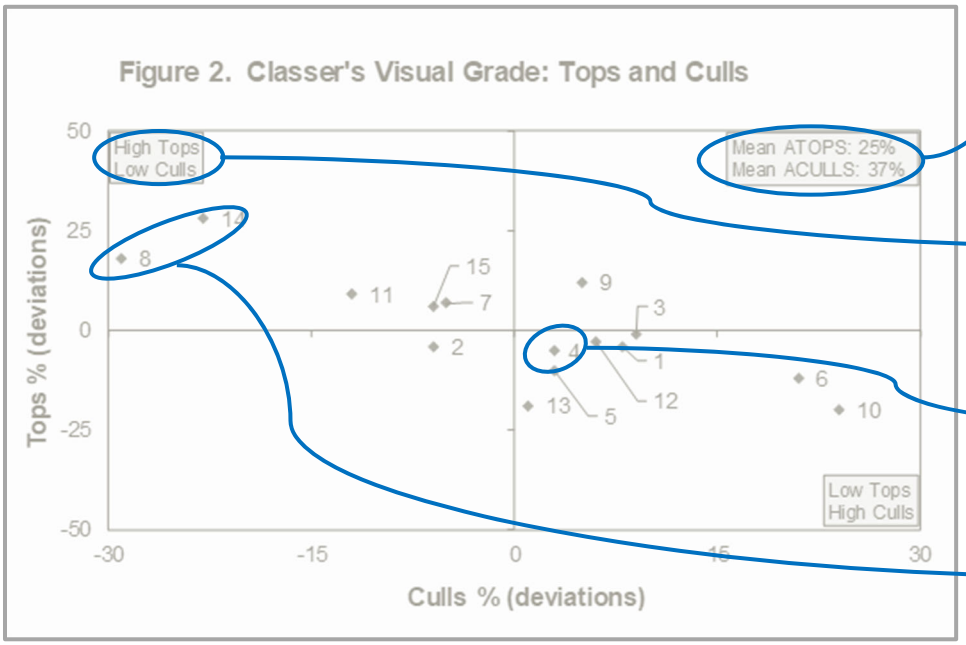
Figure 1d. Combined measured traits (WP+ index) and combined visually assessed traits for the site objective.



Understanding the Results - Summary Graphs

The following quadrant graphs summarise sire results for trait combinations of particular interest to industry. Sire codes are as per Table 2. The blue boxes describe the high and low quadrants of results for the traits, generally placed within the highest performing and the lowest performing quadrants. Progeny group averages are also reported for the graphed traits. Further descriptions are included in the accompanying text.

Explanation of a quadrant graph:



Progeny group averages: in this instance for Tops / Culls.

For this figure, this top left quadrant reports the most favourable performance (High Tops and Low Culls). Different quadrants will be the most / least optimal for different trait combinations.

This sire is performing close to the progeny group average.

These two sires are recorded in the extreme portion of the most optimal quadrant for this set of traits (Top / Culls).

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.

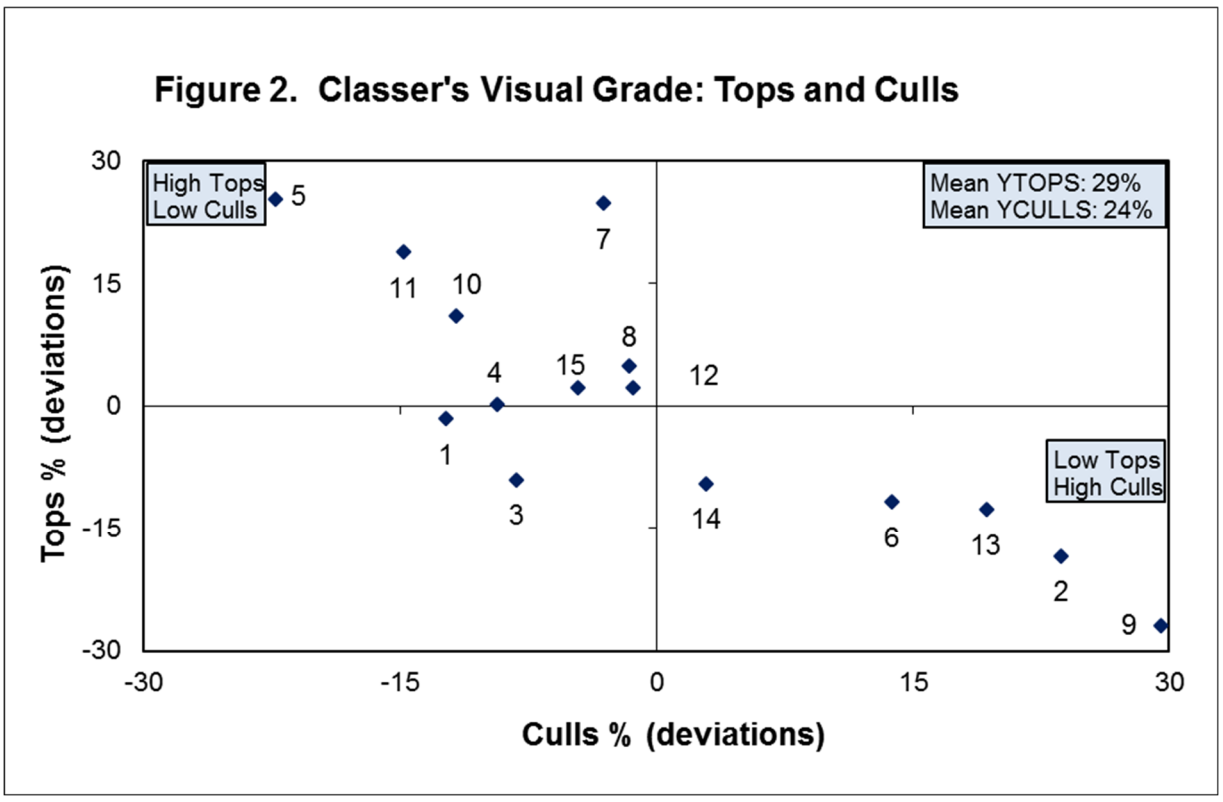


Figure 3. Fleece Weight and Fibre Diameter (FBVs)
The graph describes performance for clean fleece weight (CFW) on the side axis and fibre diameter (FD) on the bottom axis. Sires that are above average for fleece weight and below average fibre diameter are located in the top left hand quarter.

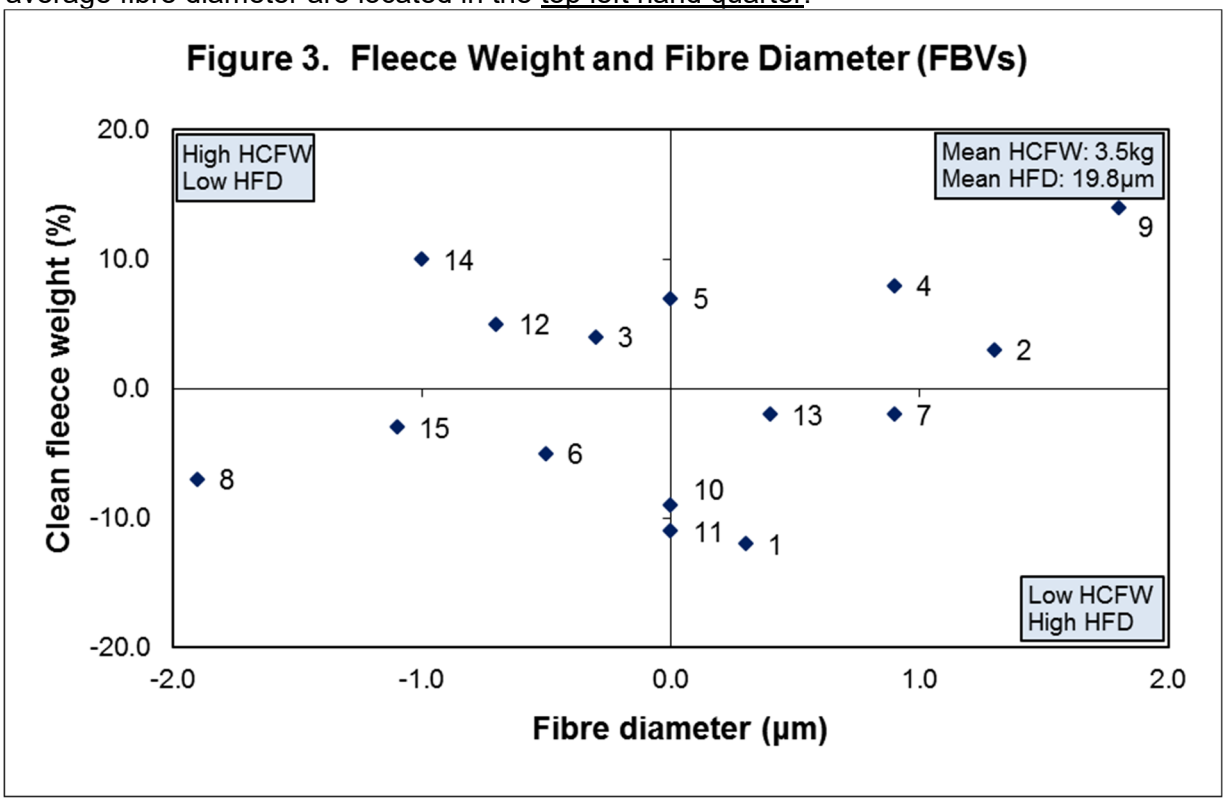


Figure 4. Fleece Weight and Staple Length (FBVs)
The graph describes performance for clean fleece weight (CFW) on the side axis and staple length (SL) on the bottom axis. Sires that are above average for fleece weight and above average for staple length are located in the top right hand quarter.

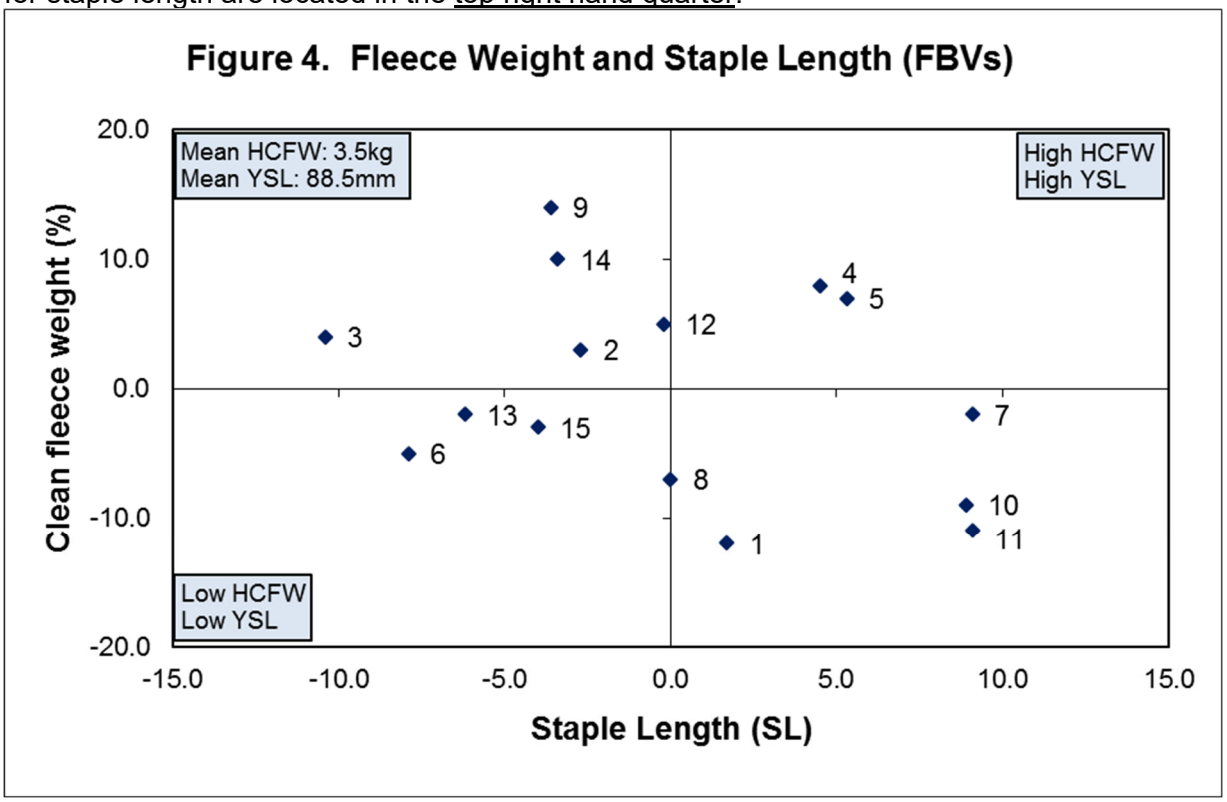


Figure 5. Fleece Weight and Body Weight (FBVs)
The graph describes performance for clean fleece weight (CFW) on the side axis and body weight (WT) on the bottom axis. Sires that are above average for fleece weight and above average for body weight are located in the top right hand quarter.

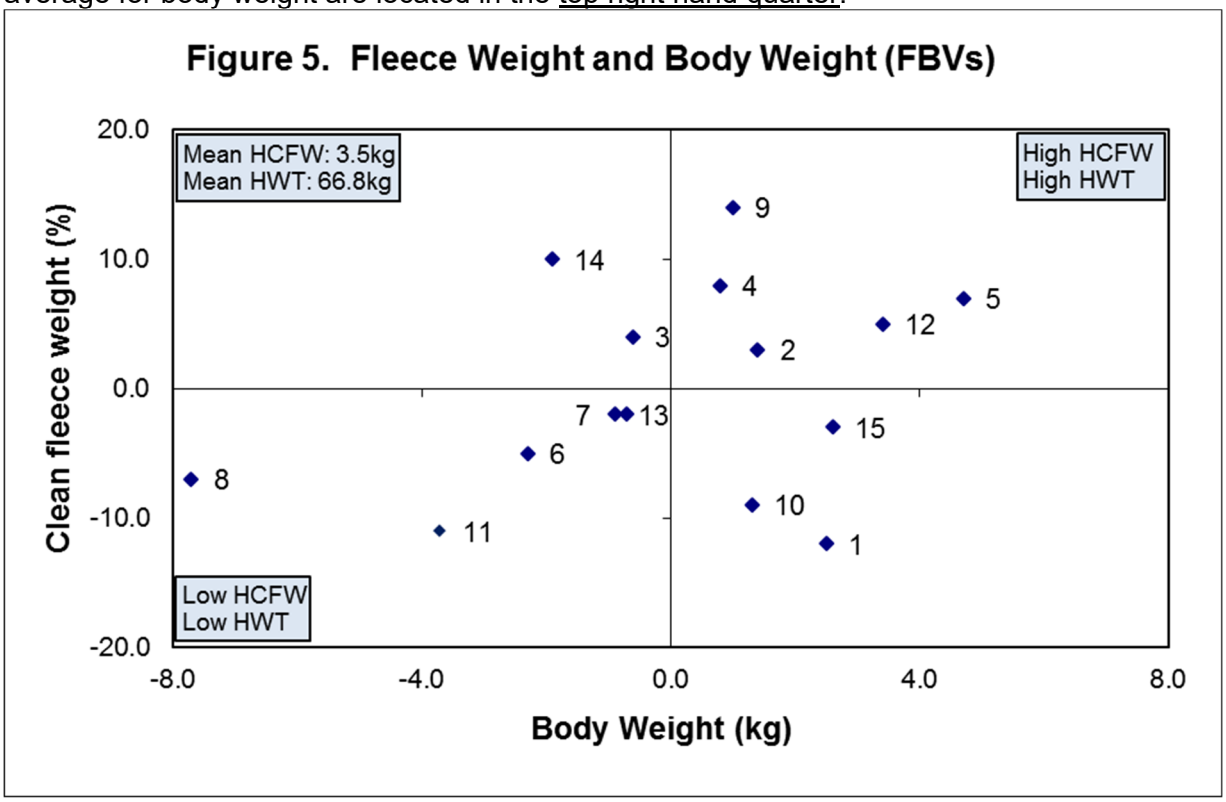


Figure 6. Fleece Weight and Fat (FBVs)
The graph describes performance for clean fleece weight (CFW) on the side axis and fat depth (FAT) on the bottom axis. Sires that are above average for fleece weight and above average for fat are located in the top right hand quarter.

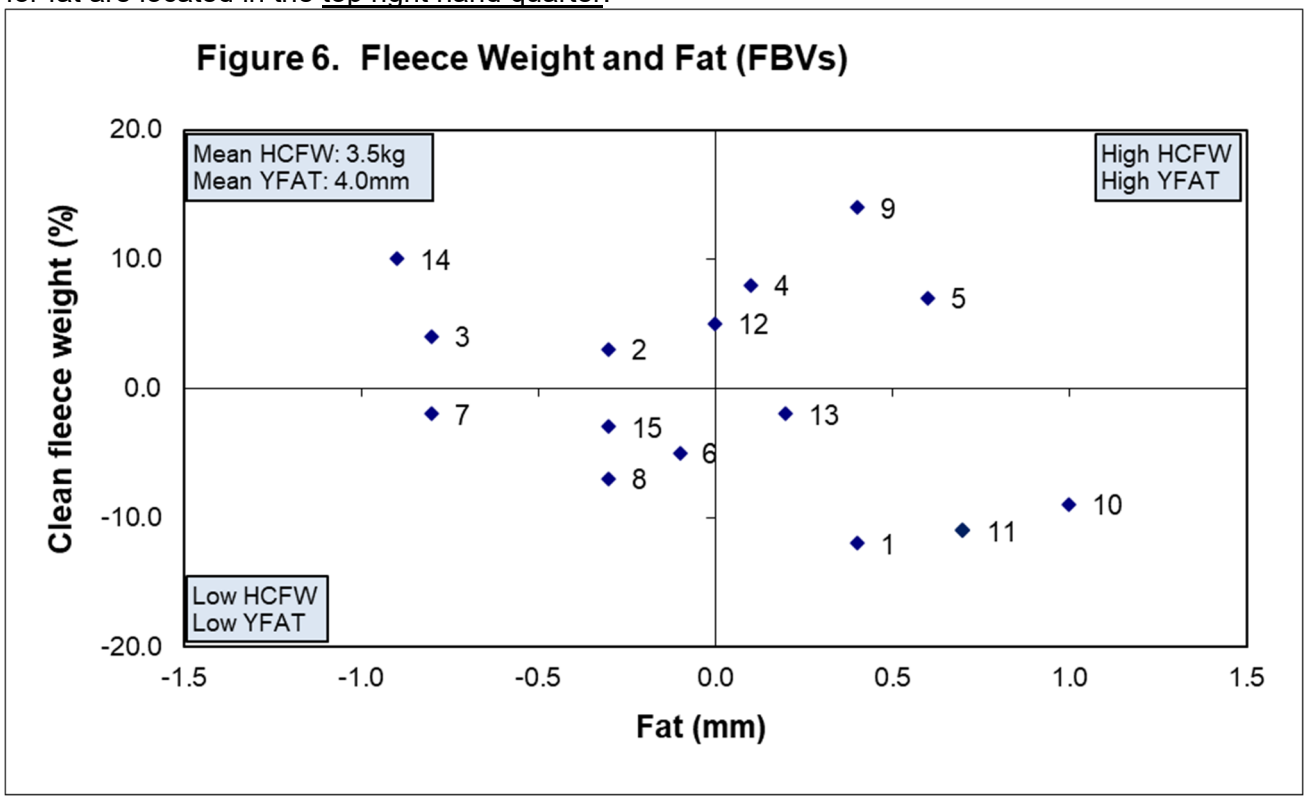


Figure 7. Fleece Weight and Eye Muscle Depth (FBVs)
The graph describes performance for clean fleece weight (CFW) on the side axis and eye muscle depth (EMD) on the bottom axis. Sires that are above average for fleece weight and above average for eye muscle depth are located in the top right hand quarter.

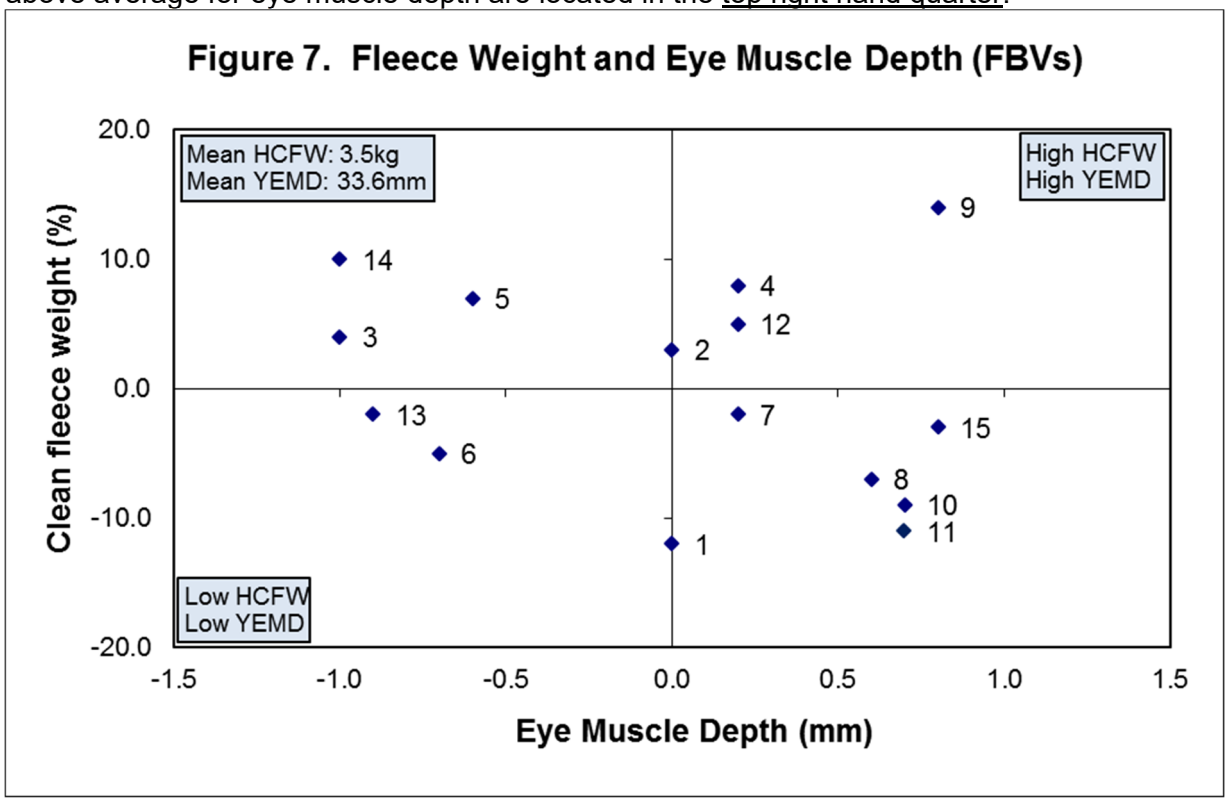


Figure 8. Fleece Weight (FBV) and Breech Wrinkle (Dev)
The graph describes performance for clean fleece weight (CFW) on the side axis and breech wrinkle (BRWR) on the bottom axis. Sires that are above average for fleece weight and below average for breech wrinkle are located in the top left hand quarter.

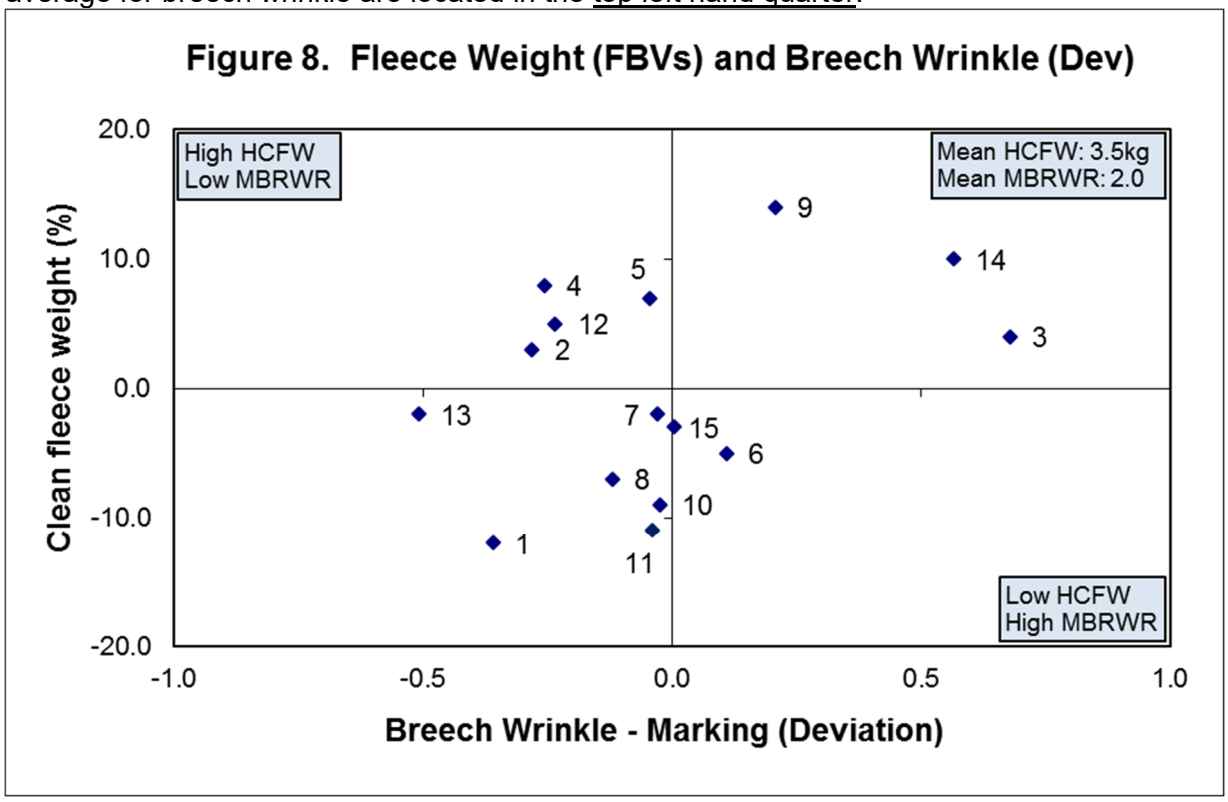


Figure 9. Body Weight and Eye Muscle Depth (FBVs)
The graph describes performance for body weight (WT) on the side axis and eye muscle depth (EMD) on the bottom axis. Sires that are above average for body weight and above average for eye muscle depth are located in the top right hand quarter.

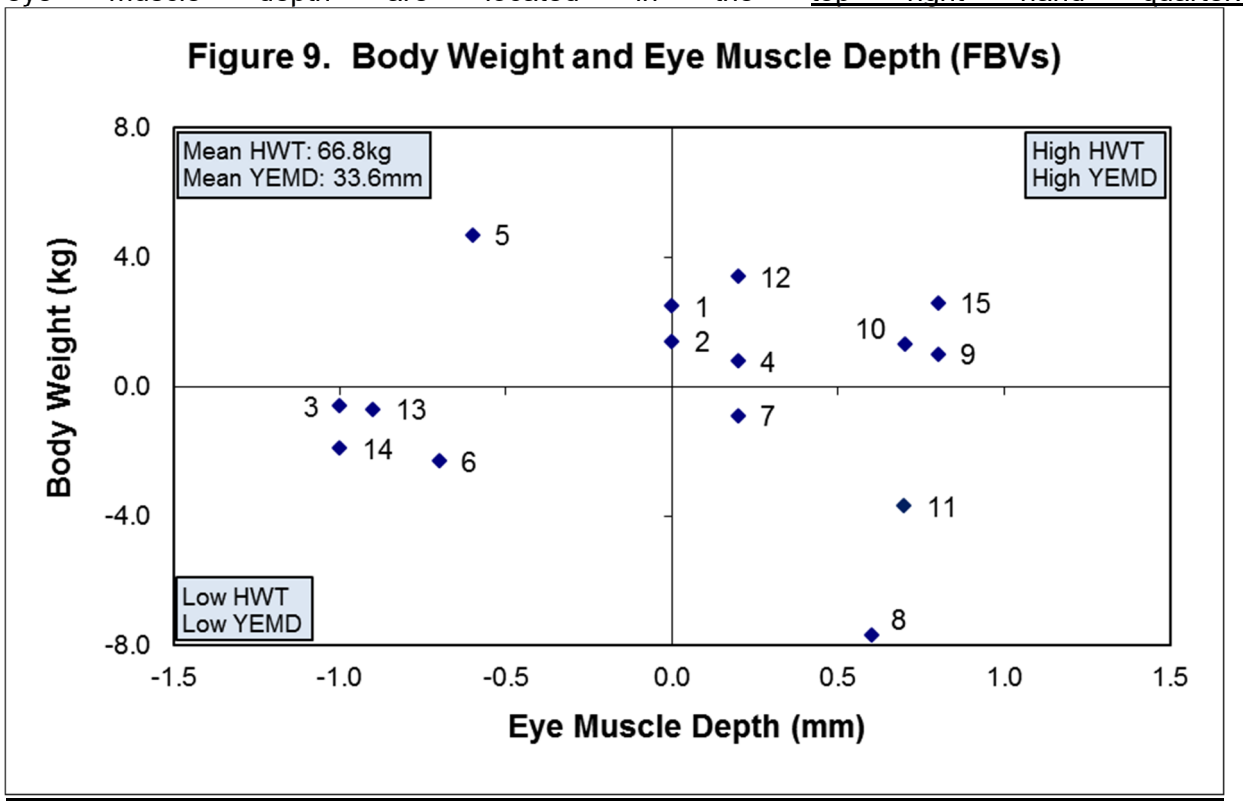


Figure 10. Staple Strength and Worm Egg Count (FBVs)
The graph describes performance for staple strength (SS) on the side axis and worm egg count (WEC) on the bottom axis. Sires that are above average for staple strength and below average for worm egg count are located in the top left hand quarter.

Worm Egg Count (WEC) not collected as minimum measurement threshold not yet reached.

SPONSORS, CONTRIBUTORS AND VOLUNTEERS

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 Trial. We would also like to thank those individuals, and/or businesses who have volunteered their time in helping the site run as smoothly as possible throughout the year, whether that be in the form of providing labour, or helping with specific tasks as required by the AMSEA protocols. It is important to acknowledge Mentara Park, who importantly offered to be the host site for 2021 & 2022 drops for the SA Merino Sire Evaluation Trial, as well as volunteering their own time in planning and labour.

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