

Elders Victoria Sire Evaluation Group

Central Test Sire Evaluation

2012 Drop First & Final Assessment



Conducted by
Elders Victoria Sire Evaluation Group



under the auspices of
The Australian Merino Sire Evaluation Association



GENSTOCK Aust.
David and Ros Kennett
Ph: (03) 5570 8280
mail@genstockaust.com.au



Advanced Livestock Services
Contact: Stefan Spiker
Ph: (03) 5573 3201
stefan.als@bigpond.com



Riverina Wool Testers
Ph.: (02) 6925 1407
rwt@wooltesters.com.au



Sheep Pro
Mark Jenkinson
Email: sheepro@active8.ne

May 2014

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

Australian Sheep Breeding Values reported here are based on analyses conducted by Sheep Genetics.

Elders Balmoral Victoria Sire Evaluation Group Central Test Sire Evaluation

The Elders Victoria Sire Evaluation 2012 drop first and final assessment is an accredited Central Test Sire Evaluation (CTSE) site evaluation. It conforms to the requirements of the Australian Merino Sire Evaluation Association (AMSEA).

The Elders Victoria Sire Evaluation Trials aim to evaluate and promote leading sires suited to fine wool production in Western Victoria.

This goal is achieved by informing participants, their clients and interested woolgrowers on events surrounding the trials, and in addition to this; produce and distribute annual reports and periodic newsletters. To further promote the evaluation, displays of progeny, data and their fleeces have been on show at the Australian Sheep & Wool Show now held in Bendigo (1998-2013), Balmoral Show and Hamilton Sheepvention.

Since April 2000 successful annual Open Days have been held at “The Mountain Dam”, “Kerrsville”, “White Oaks”, “Arundale”, “Tuloona”, “Mokanger”, “Yiddinga” and “Wando Estate” to inspect progeny and to discuss the sire evaluation program with interested woolgrowers.

In 1998 a small group of stud breeders met to form what is now known as the Elders Balmoral Victoria Sire Evaluation Group. The Sire Evaluation Trials commenced in 1998 and as of this year there will be 17 progeny drops: 1998 -2014. All trials are run for a minimum of 2 years.

At the commencement of the 2008 progeny trial, the committee decided as a means of continuing the trials and to lessen the increasing burden, that future trials would continue as usual over the 2 year period, but would have only one major classing and fleece assessment, to be taken at the usual time of the 2nd assessment. The cost and time benefits have been significant whilst still providing all involved with invaluable information on the progeny in the trial. It has however, highlighted the importance of collecting base data during the trial, since the 2009 drop were impacted by deaths from flooding in 2010 prior to full classing and measurement collection.

We currently take micron and greasy fleece weight at the 1st shearing and the full range of measurements at the 2nd shearing.

Planning and direction is developed by the Elders Victoria Sire Evaluation Management Committee.

Over recent years we are utilizing the base trial to run additional trials in conjunction. An example is fertility analysis of sires, from progeny in the 2010 drop and a pedigree collection comparison last year.

Host Properties

The 2012 & 2013 drop evaluation was hosted at “Wando Estate”, Casterton. (See page 5 for more detail)

Evaluations have been held on privately owned host properties around the Balmoral district progressing to a new property every two years. Host properties run Australian Merino fine wool ewes with genetics suitable for the district’s environment.

- 1998 & 1999 drop – Host property “The Mountain Dam” Balmoral
- 2000 & 2002 drop - Host property “Kerrsville”, situated between Balmoral and Coleraine
- 2002 & 2003 drop – Host property “White Oaks”, Gringegalgona Merino Stud at Balmoral.
- 2004 & 2005 drop – Host property “Arundale”, Balmoral
- 2006 & 2007 drop – Host property “Tuloona”, Harrow
- 2008 & 2009 drop – Host property “Mokanger, Cavendish
- 2010 & 2011 drop – Host property “Yiddinga”, Edenhope
- 2012 & 2013 drop – Host property “Wando Estate” , Casterton
- 2014 – Host property “Mepunga”, Wannon

Thank you to our hosts, sponsors, committee and participants for enabling this valuable assessment of Merino genetics.

Tom Silcock
Chairman
Elders Victoria Sire Evaluation Group

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Management Committee

Tom Silcock (Chair)	03 5388 2238	themountaindam@bigpond.com
Hugh Jarvis (Deputy Chair).....	03 5588 6356	suejarvis@bigpond.com
Andrew Howells (Secretary)	0418 846 291	andrew.howells@elders.com.au
Michael Craig (Treasurer)	03 5588 1395	tuloonapastoral@bigpond.com
Amy Tieny (data collection).....	0427 555 027	amy.tierney@elders.com.au
Tom & Julia Waldron (Data collection).....	03 55708359	minno.creek@gmail.com
Nick Falkenberg (Host owner manager).....	0407 559 680	nickfalk@optusnet.com.au
Tom Sweeny (Host manager)...	0419 362 173	wandoestate@bigpond.com
Colin Frawley	03 5578 6334	wirra@ansonic.com.au
Daniel Rogers	03 53882257	yulong@activ8.net.au
David Whyte	03 5572 2266	dwhyte@elders.com.au
Elise Kealey	0448 600 525	elisekealey@gmail.com
Jim Farran	03 5585 1888	j.farran@bigpond.com
Jonno Hicks	03 53922366	jonno@hannaton.com.au
Mark Bunge	03 5579 7224	kooringal@clearmail.com.au
Matthew Crawford	03 5573 3383	woodside2011@bigpond.com
Peter Hayes	03 5573 3207	balintore1@bigpond.com
Richard Beggs	03 5577 8222	office@nareebnareeb.com.au
Richard McShane.....	03 5574 2367	mokanger2@bigpond.com
Robert Close	03 5570 4238	kurrawirra@aussiebroadband.com
Robert Plush	03 5575 0208	rjplush@bigpond.com
Stephen Silcock	03 5574 3202	sjsilcock@bigpond.com
Tony Kealy	03 5586 5252	kealy6@bigpond.com

For further information on this report please contact

Ben Swain: 02 6743 2306, ben_swain@bigpond.com
Andrew Howells: 0418 846 291, andrew.howells@elders.com.au

2012 Drop First & Final Assessment

The information in this site evaluation report provides a comprehensive assessment of the 2012 drop, a single and final assessment of the sire's progeny performance, both measured and visually assessed traits. The fleece assessment was made at 18 months of age with 12 months of wool growth.

Sire and Owner Details

Breeders flock, Sire name Sire ID #, Breed †	Owner Details
Bindawarra, 080358 503892-2008-080358, Merino	Steven Harrison 72 Giffard West Road, Giffard West VIC 3851 P: (03) 5146 8303, E: slhgiffard@bigpond.com
Connewarran, 8016 (Link) 504704-2008-008016, Merino	Richard Weatherly Connewarran, PO Box 21, Mortlake VIC 3272 P: (03) 5599 7276, F: (03) 5599 7227, E: connewarran@westvic.com.au
Glenpaen, 080356 504654-2008-080356, Merino	Rod Miller 733 Victoria Valley Rd, Brimpaen VIC 3401 P: (03) 5383 9227, F: (03) 5383 9227, E: glenpaen@harboursat.com.au
Gringegalgon, 071609 503097-2007-071609, Merino	Stephen Silcock 279 Melville Forest - Vasey Rd, Vasey VIC 3407 P: (03) 5574 3202, F: (03) 5574 3239, E: sslcock8@bigpond.com
Hazeldean, 8.3561 (Link) 500383-2008-003561, Merino	Jim Litchfield Hazeldean Pty Ltd, Cooma NSW 2630 P: (02) 6453 5555, F: (02) 6453 5526, E: admin@hazeldean.com.au
Koorngal, 102277 504170-2010-102277, Merino	Mark Bunge 2115 Coleraine-Edenhope Rd, Coleraine VIC 3315 P: (03) 5579 7224, F: (03) 5579 7225, E: bunge5@bigpond.com
Lachlan Merinos, 08SP30 (Link) 505022-2008-08SP30, Merino	Glen and Margot Rubie 94 Warroo Bridge Road, Forbes NSW 2871 P: (02) 6857 2118, F: (02) 6857 2162, E: lachlanmerinos@activ8.net.au
Leahcim Poll, 090918 (Link) 600815-2009-090918, Poll Merino	Andrew and Rosemary Michael PO Box 31, Snowtown SA 5520 P: (08) 8865 2085, F: (08) 8865 2585, E: leahcimgenetics@bigpond.com
Moojepin, 100248 504637-2010-100248, Merino	David Thompson PO Box 625, Katanning WA 6317 P: (08) 9821 1083, F: (08) 9821 1083, E: moojepin@westnet.com.au
Nareeb Nareeb, 100655 500246-2010-100655, Merino	Richard Beggs 4395 Hamilton Chatsworth Rd, Nareeb VIC 3293 P: (03) 5577 8222, F: (03) 5577 8362, E: office@nareebnareeb.com.au
Nerstane, 080121 503298-2008-080121, Merino	John, Hamish and Jock McLaren Nerstane, Woolbrook NSW 2354 P: (02) 6777 5881, F: (02) 6777 5922, E: jock@nerstane.com.au
One Oak No. 2, BL0010 503855-2010-100010, Merino	Graham Wells One Oak, PO Box 84, Jerilderie NSW 2716 P: (03) 5886 1269, F: (03) 5886 1792, E: oneoakpl@bigpond.com
Pooginook, Clark (Link) 500788-2010-103462, Merino	John Sutherland Pooginook, Jerilderie NSW 2716 P: (02) 6954 6145, F: (02) 6954 6168, E: pooginook@parawaypastoral.com
Ridgway Poll, 091137 601116-2009-091137, Poll Merino	Ric and Gail Ridgway Box 153, Lameroo SA 5302 P: (08) 8578 8039, F: (08) 8578 8039, E: ridgwayrj@activ8.net.au
Roseville Park, 090014 (Link) 504166-2009-090014, Merino	Matthew and Cherie Coddington 39R Dilladerry Rd, Dubbo NSW 2830 P: (02) 6887 7286, F: (02) 6887 7103, E: rpmerinos@bigpond.com
The Mountain Dam, 11/CWA029 504572-2011-CWA029, Merino	Tom and Alison Silcock 429 Silcocks Road, Telangatuk East VIC 3401 P: (03) 5388 2238, F: (03) 5388 2235, E: themountaindam@bigpond.com
Toland Poll, 111021 601082-2011-111021, Poll Merino	Phil Toland 1888 Feltrim Rd, Violet Town VIC 3669 P: (03) 5798 1247, F: (03) 5798 1404, E: tolandmerino@bigpond.com
Yalgoo, 070441 (Link) 501552-2007-070441, Merino	Grant and Jock Nivison Yalgoo, PO Box 141, Walcha NSW 2354 P: (02) 6777 2525, F: (02) 6777 2875, E: yalgoopartnership@bigpond.com
Yiddinga, 101057 (Unreg) 509242-2010-101057, Merino	James Farran PO Box 222, Edenhope VIC 3318 P: (03) 5585 1888, F: (03) 5586 6214, E: j.farran@bigpond.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*.

(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 2012 drop progeny and location

Wando Estate is located 20km northeast of Casterton. Wando is 3036 hectares in size and runs a fine wool, plus beef cattle grazing operation. Pasture base of Phalaris, Ryegrass and sub clover. The terrain is challenging with steep slopes plus undulating country leading to spring fed creeks and table top hill tops.

Stock water is from dams and creeks with the Wando River running through the property. Over the past 5 years we have been working on an extensive sub divisional fencing program. Paddock sizes are mostly 15 to 20 hectares to allow a rotational grazing operation to work effectively and efficiently. Long term average yearly rainfall for the last 13 years is 644mm. See below chart

Selection and Mating

The Wando ewes are classed visually first with any physical or structural faults removed from the flock. Then remaining ewes are laser scanned at shearing and ewes are indexed using the FP+ index.

For the 2012 trial 1,100 ewes were selected. The ewes were AI on the 3rd and 4th of April 2012. Nineteen Sires were joined to an average of 58 ewes each. The ewes on average were in body condition score 2.8 at the time of AI.

Pregnancy and lambing

Pregnancy ultrasound scanning of the trial ewes was conducted on the 4th June 2012. Results were 440 single bearing ewes and 289 twin bearing ewes with a few triplets that were removed from the trial. Single and twin bearing ewes were run separately.

In mid-August the AI ewes were drafted into their sire groups and allocated to 38 individual lambing paddocks, with the first lambs being born on the 26th of August and the last on the 2nd of September.

After lambing had finished the lambs were tagged and weighed and a visual assessment recorded of skin and fibre pigment and a rating for hairy birth coat. The ewes and lambs were then boxed but still run as two separate management groups of single bearing ewes and twin bearing ewes.

Weaning and Seasonal conditions

Lambs were marked on October the 19th 2012. Prior to marking the lambs were given a score for breech cover and breech wrinkle.

Prior to weaning the ewes and lambs were imprint fed. With a less than favourable end to spring the weaners were supplementary fed on a ration of 3 kgs/DM/hd/wk of silage plus 1kg/hd/wk of barley. The 2012 drop weaners were shorn on the 2nd of May 2013 with mid side samples taken plus fleeces weighed.

Assessments

The 2012 drop growth rates were recorded at 120 to 150 grams/day from August 2013 to end of September 2013. Breech and dag scores were also recorded and WEC were also collected. And in November 2013 fat and eye muscle scanning took place. In March 2014 the 2012 drop sheep were visually classed plus mid side samples taken prior to being displayed at the annual field day on April the 11th. They were shorn on the 28th of April 2014.

Rainfall

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total mm
2005	22.0	41.0	12.5	23.5	10.0	64.5	41.5	81.0	47.0	82.0	28.5	31.5	485.0
2006	29.5	51.5	27.5	49.5	37.0	19.0	57.5	36.0	74.0	8.0	14.0	4.5	408.0
2007	164.0	0.0	22.5	32.5	109.0	63.5	75.5	57.0	59.5	31.5	116.5	32.5	764.0
2008	20.0	7.5	49.5	33.0	40.0	51.5	61.5	83.0	54.5	9.0	30.5	126.0	566.0
2009	4.0	1.6	25.5	39.5	51.5	39.5	123.0	102.0	73.5	46.5	42.0	52.5	601.1
2010	18.5	26.0	17.0	59.0	50.0	75.0	81.0	91.5	70.0	58.0	60.0	112.0	718.0
2011	147.5	40.0	130.0	57.0	56.0	82.0	90.0	95.0	93.0	22.0	46.0	46.0	904.5
2012	4.0	4.0	38.5	37.0	44.0	93.5	149.0	116.0	60.0	38.5	39.0	30.0	653.5
2013	10.0	20.0	19.0	25.0	53.0	70.0	119.5	149.0	73.5	99.5	32.0	18.5	689.0
2014	24.0	22.0	15.0	71.5									132.5

Assessment and management program

Activity	Date/s	Age	Wool
Selection of ewes	February 2012		
Allocation of ewes for mating	April 2012		
Pregnancy scanning	4 June 2012		
Separated into sire lambing groups	15 August 2012		
Lambing: start – finish	26 August – 2 September 2012		
Lambing mobs boxed to one management group	12 September 2012	17 days	
Tagging, pigmentation and breech scoring	12 September 2012	17 days	
Marking and breech scoring	19 October 2012	54 days	
Weaning	19 December 2012	115 days	
Mid side fleece sampling	• PW 2 May 2013	8 months	8 months
	• A 18 March 2014	18 months	11 months
Visual trait scoring	• A 18 March 2014	18 months	11 months
Shearing	• PW 2 May 2013	8 months	8 months
	• A 28 April 2014	19 months	12 months
Fat and eye muscle scanning	• H 12 November 2013	14 months	6 months
Worm egg count sampling	• Y 3 July 2013	10 months	
Body weighing	• W 19 December 2012	115 days	
	• PW 24 May 2013	8 months	
	• Y 5 July 2012	10 months	
	30 August 2012	12 months	
	24 October 2012	13 months	
	• H 12 November 2012	14 months	
	13 December 2012	15 months	
	24 October 2012	14 months	
	• A 16 March 2014	18 months	
	28 April 2014	19 months	
Drench	Worm burdens monitored and progeny drenched when required. Drenched approx 4 times during trial.		
Jetting	Treated with Klik at marking. Vetrazine post crutching.		
Supplementary feeding	Silage and Barley		
Field day or public display of 2012 drop sheep	<ul style="list-style-type: none"> • Field Day & Progeny Display at Wando– April 2013 • Field Day & Progeny Display at Wando– April 2014 • Display at Hamilton Sheepvention – August 2013 • Progeny Display at Balmoral Show – 2013 & 2014 • Display at Australian Sheep & Wool Show - Bendigo – July 2013 		

Visual trait assessment and site Breeding Objective

Visual trait assessment

1st and final assessment

Classer's Grade: Mr Elliot Lindley, Elders

Trait Scores: Committee

Site Breeding Objective used to assess the 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 that is described below was developed by the site committee in consultation with the classer prior to the grading.

Breeding Objective

The goal is to select sheep that are well grown, with sound conformation and carrying heavy fine wool fleeces of good character, colour and nourishment.

Combined measured traits and visual trait performance

Summary graph: visual and measured performance

Each sire that meets reporting thresholds for index accuracies is located on the graph. The graph describes performance for combined measured traits and combined visual assessment.

A different graph is provided for each of the three indexes reported. In each graph, visual trait performance is a combination of Classer's Grade performance (Tops and Culls). More information is found in "Understanding the Results".

Sires that are above average performers for combined measured traits and Classer's Grade are located in the top right hand quarter of the graph.

Sire code	Breeders flock, Sire number	Sheep Genetics ID	Sire of Sire
1	Bindawarra, 080358	503892-2008-080358	Unknown
2	Connewarran, 8016	504704-2008-008016	503892-2004-040400 (Bindawarra, 400)
3	Glenpaen, 080356	504654-2008-080356	504654-2006-060380
4	Gringegalgon, 071609	503097-2007-071609	503097-2005-051431
5	Hazeldean, 8.3561	500383-2008-003561	500383-2002-009558 (Hazeldean, 2.9558)
6	Koorinal, 102277	504170-2010-102277	Unknown
7	Lachlan Merinos, 08SP30	505022-2008-08SP30	Unknown
8	Leahcim Poll, 090918	600815-2009-090918	600815-2007-070319
9	Moojepin, 100248	504637-2010-100248	504637-2008-081206
10	Nareeb Nareeb, 100655	500246-2010-100655	500246-2008-120379 (Nareeb Nareeb, 080379)
11	Nerstane, 080121	503298-2008-080121	501553-2005-050448
12	One Oak No. 2, BL0010	503855-2010-100010	502251-2008-080076
13	Pooginook, Clark	500788-2010-103462	Unknown
14	Ridgway Poll, 091137	601116-2009-091137	601116-2006-060571
15	Roseville Park, 090014	504166-2009-090014	504166-2006-064065
16	The Mountain Dam, 11/CWA029	504572-2011-CWA029	504704-2006-006042 (Connewarran, 6042)
17	Toland Poll, 111021	601082-2011-111021	600792-2009-090576 (Mernowie Poll, 090576)
18	Yalgoo, 070441	501552-2007-070441	501552-2005-050048
19	Yiddinga, 101057	509242-2010-101057	Unknown

Figure 1a, 1b and 1c. Combined measured traits and visual trait performance

Figure 1a. Combined measured traits based on an AMSEA Dual Purpose Plus (DP+) index. Based on a meat focused production system where surplus progeny are sold as lambs and a portion of ewes are joined to terminal sires.

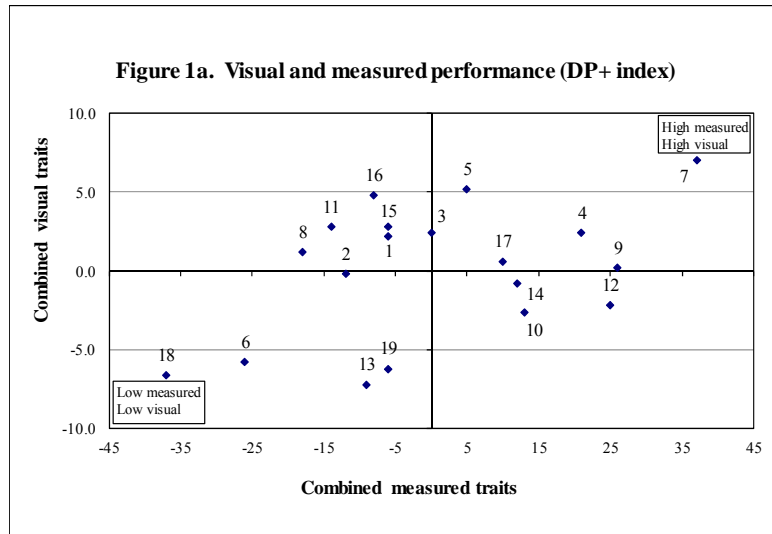


Figure 1b. Combined measured traits based on an AMSEA Merino Production Plus (MP+) index. Based on a balanced wool and meat production system where surplus progeny are sold as hoggets.

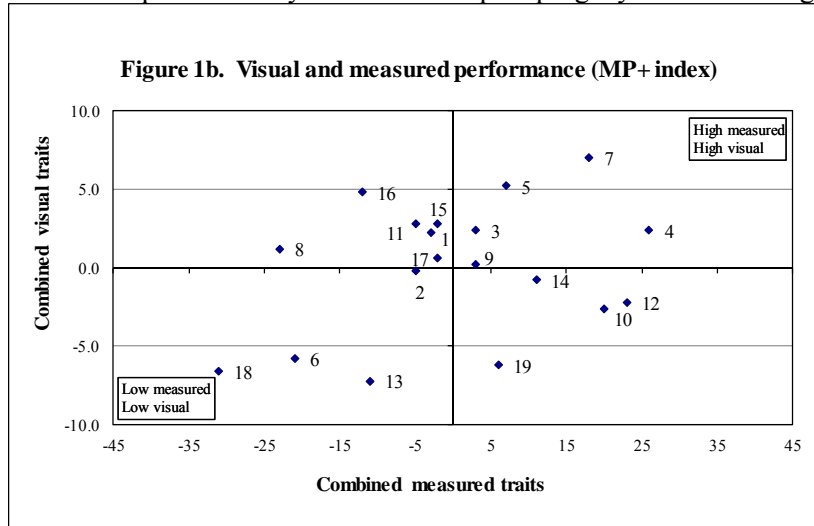


Figure 1c. Combined measured traits based on an AMSEA Fibre Production Plus (FP+) index. Based on a wool focused production system where wethers are retained, operating in an environment where worms cause economic losses.

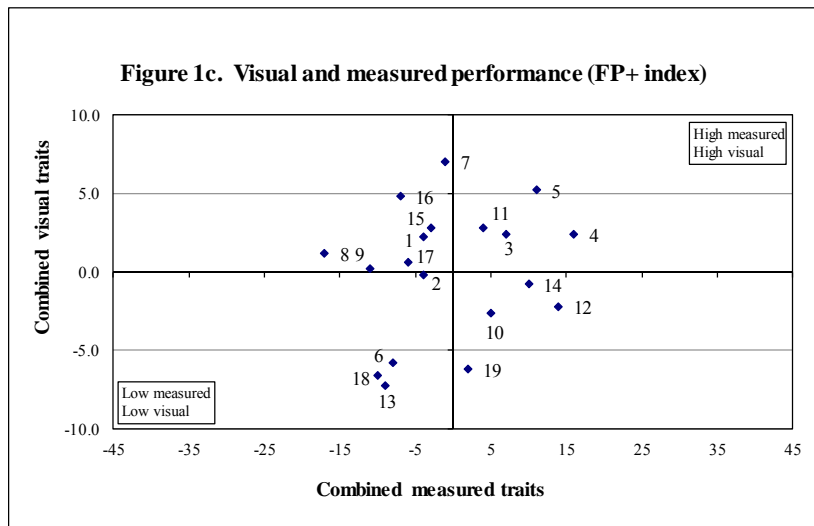


Table 1. AMSEA Index Values and Classer's Grade

The highest performing 3 sires (or more if there is a dead heat) for each trait (trait leaders) are highlighted by shading. Each sire is listed for Classer's Grade and the same three indexes at all site evaluations. An additional index considered relevant to the site evaluation is also reported.

The index values reported are based on measured traits FBV performance with varying the emphasis on fleece weight, fibre diameter, body weight, staple strength and worm egg count. See 'Index Options' (page 26) for more information on the indexes presented in the table below.

AMSEA Indexes are the same as MERINOSELECT Indexes apart from NLW (Number of Lambs Weaned) being given a zero FBV value in AMSEA calculations.

- **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.
- **Merino Production Plus (MP+):** Based on a balanced wool and meat production system where surplus progeny are sold as hoggets.
- **Fibre Production Plus (FP+):** Based on a wool focussed production system where wethers are retained, operating in an environment where worms cause economic losses.
- **Fine 20+SS (F20%+SS):** High emphasis on fibre diameter and staple strength. There is adequate emphasis on other traits to maintain performance except a moderate reduction in reproduction (number of lambs weaned – NLW).

Sire Code	Breeder's flock, Sire name	Number of progeny	AMSEA Index Values				Classer's Grade	
			Dual Purpose Plus	Merino Production Plus	Fibre Production Plus	Fine 20% + SS	Tops % (dev)	Culls % (dev)
1	Bindawarra, 080358	39	94	97	96	98	3	-8
2	Connewarran, 8016	34	88	95	96	109	3	4
3	Glenpaen, 080356	23	100	103	107	104	7	-5
4	Gringegalga, 071609	52	121	126	116	111	4	-8
5	Hazeldean, 8.3561	21	105	107	111	112	12	-14
6	Koorringal, 102277	30	74	79	92	88	-10	19
7	Lachlan Merinos, 08SP30	35	137	118	99	97	20	-15
8	Leahcim Poll, 090918	43	82	77	83	88	0	-6
9	Moojepin, 100248	48	126	103	89	73	-1	-2
10	Nareeb Nareeb, 100655	32	113	120	105	106	-7	6
11	Nerstane, 080121	31	86	95	104	104	2	-12
12	One Oak No. 2, BL0010	32	125	123	114	114	-13	-2
13	Pooginook, Clark	42	91	89	91	81	-12	24
14	Ridgway Poll, 091137	50	112	111	110	105	-6	-2
15	Roseville Park, 090014	27	94	98	97	100	8	-6
16	The Mountain Dam, 11/CWA029	35	92	88	93	97	11	-13
17	Toland Poll, 111021	25	110	98	94	86	1	-2
18	Yalgoo, 070441	40	63	69	90	113	-11	22
19	Yiddinga, 101057	30	94	106	102	103	-12	19
Average performance		36	100	100	100	100	16	18

Figure 2. Fleece weight by fibre diameter

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.

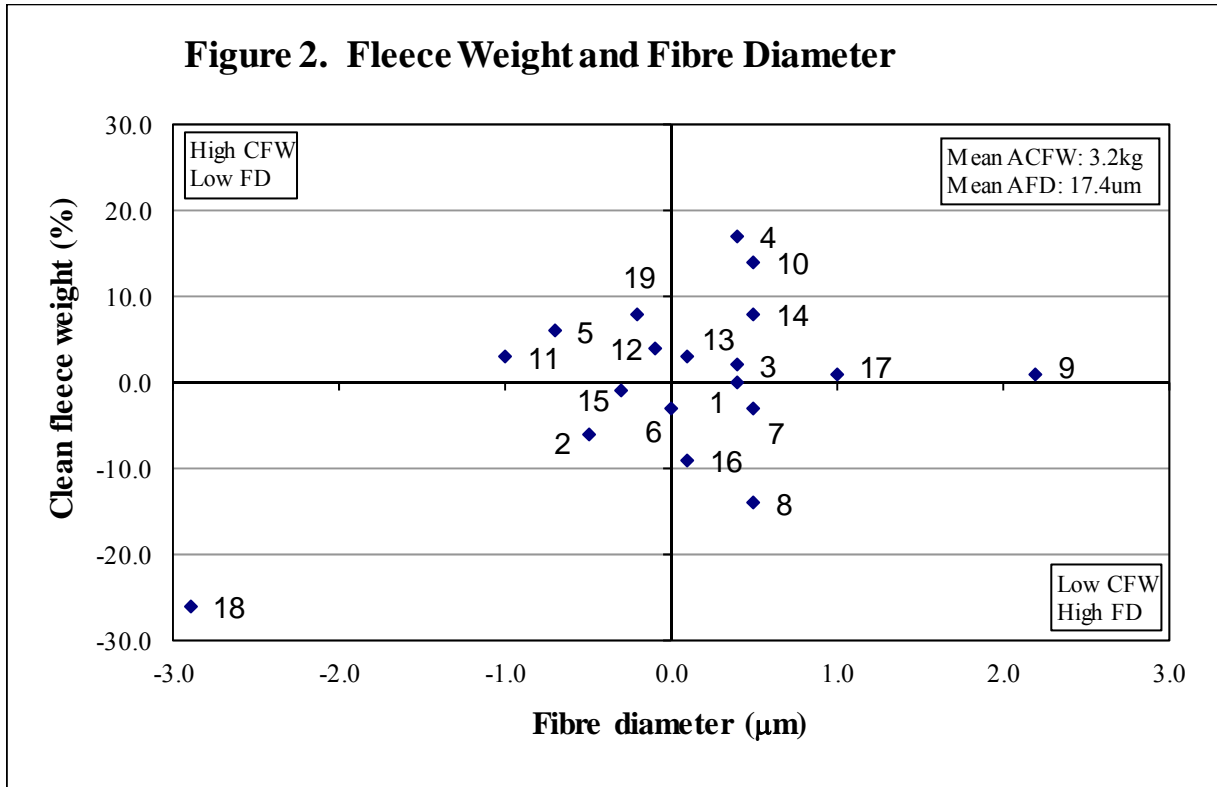
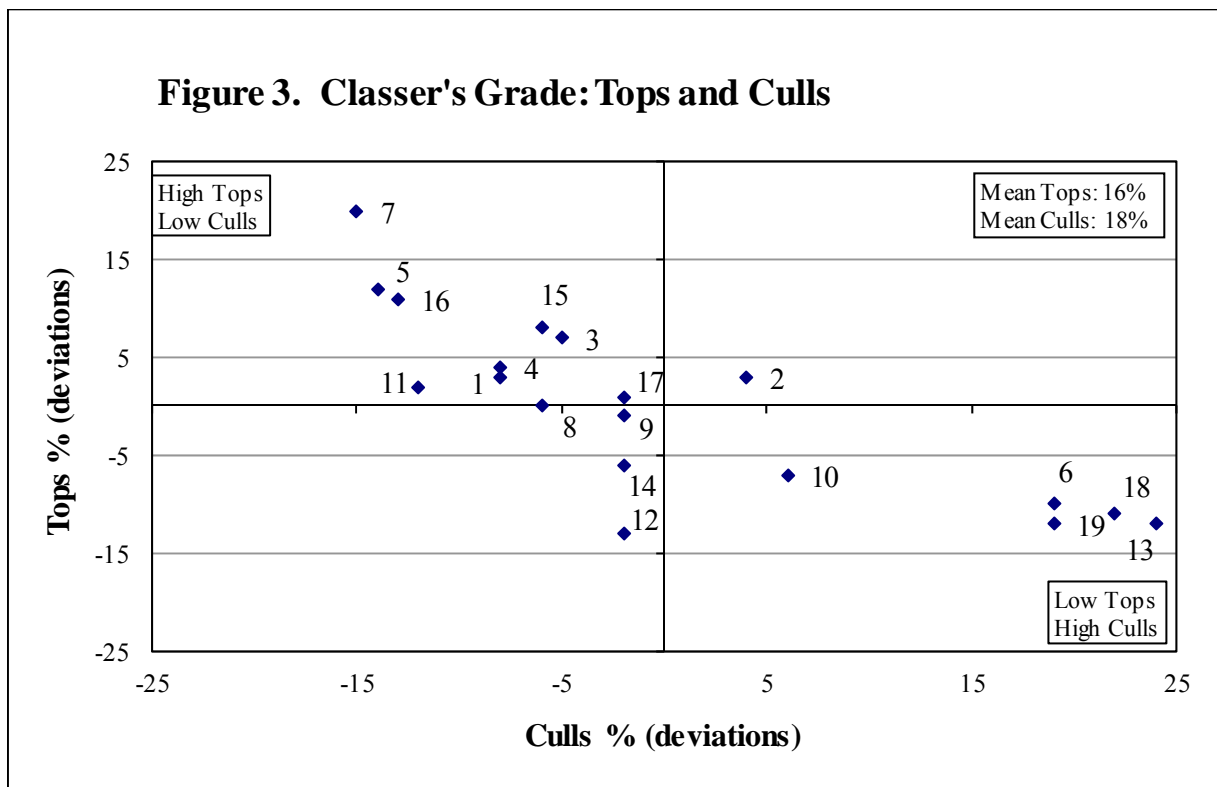


Figure 3. Classers Tops by Cull Grade

The graph describes performance for Classer's 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.



Understanding the results

Measured trait performance and Classer's 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.
Flock Breeding Values:	Flock Breeding Values (FBVs) are Estimated Breeding Values (EBVs) calculated by Sheep Genetics for the sire's 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.
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). 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 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.

Table 2. Major measured traits and Classer's Grades

Breeders flock, Sire name	Number of progeny	Flock Breeding Values (deviations)						Classer's Grade ¹	
		GFW	CFW	FD	WT			Tops	Culls
		% A [^]	% A	µm A	W	kg Y	A	% A	% A
Bindawarra, 080358	39	0	0	0.4	-0.5	-1.7	-0.9	3	-8
Connewarran, 8016	34	-6	-6	-0.5	-1.0	-2.4	-3.2	3	4
Glenpaen, 080356	23	3	2	0.4	-1.6	-2.1	-1.9	7	-5
Gringegalgon, 071609	52	16	17	0.4	1.0	2.2	3.3	4	-8
Hazeldean, 8.3561	21	6	6	-0.7	0.1	-0.9	-0.8	12	-14
Koorinal, 102277	30	-3	-3	0.0	-1.7	-4.5	-4.7	-10	19
Lachlan Merinos, 08SP30	35	-3	-3	0.5	4.6	10.3	11.5	20	-15
Leahcim Poll, 090918	43	-13	-14	0.5	-0.3	-1.6	-1.3	0	-6
Moojepin, 100248	48	2	1	2.2	3.3	7.9	8.6	-1	-2
Nareeb Nareeb, 100655	32	12	14	0.5	-1.4	-0.1	-2.5	-7	6
Nerstane, 080121	31	3	3	-1.0	-1.9	-4.3	-4.9	2	-12
One Oak No. 2, BL0010	32	4	4	-0.1	1.6	4.1	5.0	-13	-2
Pooginook, Clark	42	4	3	0.1	-0.3	-0.7	-1.3	-12	24
Ridgway Poll, 091137	50	7	8	0.5	-0.7	0.6	0.8	-6	-2
Roseville Park, 090014	27	0	-1	-0.3	-0.4	-0.3	-1.0	8	-6
The Mountain Dam, 11/CWA029	35	-9	-9	0.1	0.7	-0.2	-1.0	11	-13
Toland Poll, 111021	25	1	1	1.0	2.1	3.6	4.1	1	-2
Yalgoo, 070441	40	-24	-26	-2.9	-1.8	-5.7	-5.9	-11	22
Yiddinga, 101057	30	5	8	-0.2	-1.2	-2.1	-2.0	-12	19
Average performance	36	4.5	3.2	17.4	23.9	26.0	39.6	16	18
		kg	kg	µm	kg	kg	kg	%	%

[^] 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 Grade is expressed as the percentage deviation of average Tops% and Culls%.

Table 3. Other measured traits

Breeders flock, Sire name	Number of progeny	Flock Breeding Values (deviations)						
		FDCV	SL	SS	CURV	FAT	EMD	WEC
		% A^	mm A	N/ktex A	deg/mm A	mm H	mm H	% Y
Bindawarra, 080358	39	-0.8	-0.4	1.3	0.3	0.2	0.3	10
Connewarran, 8016	34	-1.1	-8.7	0.5	5.3	-0.5	-0.4	52
Glenpaen, 080356	23	-0.3	-0.3	5.0	1.7	-0.2	0.6	-23
Gringegalgaona, 071609	52	-0.2	5.0	1.3	-1.6	-0.8	-1.2	20
Hazeldean, 8.3561	21	0.3	6.4	-0.7	-1.2	-0.1	-0.4	-15
Koorinal, 102277	30	1.2	-3.2	-2.4	-1.3	-0.3	-0.7	-51
Lachlan Merinos, 08SP30	35	-0.8	5.0	-0.5	3.4	0.1	1.0	42
Leahcim Poll, 090918	43	-1.6	6.0	0.7	-0.5	0.5	1.0	-24
Moojepin, 100248	48	-0.4	17.9	1.6	-11.4	2.2	2.4	-29
Nareeb Nareeb, 100655	32	1.0	-4.2	4.2	-0.5	0.0	0.1	157
Nerstane, 080121	31	0.7	3.0	-5.1	-2.6	0.6	-0.2	-39
One Oak No. 2, BL0010	32	-0.5	-2.5	3.9	2.0	0.0	0.0	34
Pooginook, Clark	42	2.6	-5.8	-5.8	0.8	-0.1	-0.1	-27
Ridgway Poll, 091137	50	-0.2	6.3	2.6	-5.0	0.3	0.2	-28
Roseville Park, 090014	27	0.7	-7.1	-1.1	1.3	-0.9	-1.3	47
The Mountain Dam, 11/CWA029	35	-0.8	0.9	1.2	1.0	-0.4	0.3	-27
Toland Poll, 111021	25	0.0	4.3	-1.0	-8.4	0.1	0.9	-34
Yalgoo, 070441	40	-0.4	-14.8	-7.2	14.7	0.0	-0.6	-18
Yiddinga, 101057	30	1.0	-5.1	-0.7	-2.8	-0.8	-1.7	80
Average performance	36	19.5 %	83.2 mm	58.9 N/ktex	91.4 deg/mm	2.9 mm	22.6 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).

Table 4a and 4b. Visual trait assessments – Wool Quality and Pigmentation

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 – RESEARCHER VERSION 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.

For the majority of breeder's objectives a negative deviation would be considered favourable and the larger the deviation the better, for Wool Quality Traits.

■ 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.

Table 4a. Visual trait assessments – Wool Quality

Breeders flock, Sire name	Wool Quality																							
	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
Bindawarra, 080358	-0.2	74	14	9	0	3	-0.1	2	56	42	0	0	-0.2	0	47	49	2	2	-0.2	2	65	33	0	0
Connewarran, 8016	-0.4	81	17	2	0	0	-0.4	9	72	19	0	0	-0.3	2	56	36	6	0	-0.4	17	61	22	0	0
Glenpaen, 080356	-0.4	78	17	5	0	0	-0.1	5	52	39	4	0	-0.3	0	52	48	0	0	-0.1	0	65	35	0	0
Gringegalgon, 071609	0.1	60	20	15	1	4	0.1	0	45	49	6	0	0.0	0	27	67	6	0	0.0	2	51	47	0	0
Hazeldean, 8.3561	-0.2	73	18	4	0	5	-0.1	0	59	36	5	0	-0.2	0	50	45	5	0	-0.2	9	55	36	0	0
Koorinal, 102277	1.0	22	28	31	3	16	0.6	0	9	72	19	0	0.3	0	12	72	12	4	0.2	3	41	44	9	3
Lachlan Merinos, 08SP30	-0.2	76	10	14	0	0	-0.1	5	49	46	0	0	0.0	0	22	76	2	0	0.1	2	49	46	0	3
Leahcim Poll, 090918	0.0	57	30	9	2	2	0.1	0	41	52	5	2	0.0	0	30	61	7	2	0.2	0	36	61	3	0
Moojepin, 100248	0.2	50	23	21	4	2	0.4	2	21	65	8	4	0.6	0	7	62	21	10	0.5	2	21	60	17	0
Nareeb Nareeb, 100655	-0.1	62	25	13	0	0	-0.1	6	41	53	0	0	-0.1	4	31	59	3	3	0.0	3	53	41	3	0
Nerstane, 080121	-0.3	79	12	9	0	0	-0.3	6	61	33	0	0	-0.1	3	27	70	0	0	-0.1	0	64	33	3	0
One Oak No. 2, BL0010	0.0	59	19	22	0	0	0.2	0	31	59	10	0	0.1	0	22	66	12	0	0.1	0	47	53	0	0
Pooginook, Clark	0.7	30	28	28	2	12	0.4	0	21	65	14	0	0.3	0	17	60	23	0	-0.1	5	53	40	2	0
Ridgway Poll, 091137	0.2	48	28	20	0	4	0.0	2	42	52	4	0	-0.1	0	34	62	4	0	0.2	0	40	58	2	0
Roseville Park, 090014	-0.4	81	11	8	0	0	-0.2	0	70	30	0	0	-0.3	0	59	37	4	0	-0.3	4	81	15	0	0
The Mountain Dam, 11/CWA029	-0.5	89	11	0	0	0	-0.3	0	78	19	3	0	0.2	0	14	76	10	0	-0.1	0	59	41	0	0
Toland Poll, 111021	0.2	64	12	12	0	12	0.0	0	48	48	4	0	0.4	0	16	56	24	4	0.1	4	40	52	4	0
Yalgoo, 070441	-0.5	90	8	0	0	2	-0.3	10	62	25	3	0	-0.3	0	55	42	3	0	-0.2	3	65	32	0	0
Yiddinga, 101057	0.7	27	36	24	0	13	0.3	0	21	70	9	0	0.1	0	27	61	12	0	0.3	0	24	76	0	0
Average performance	1.6	63	19	13	1	4	2.5	3	46	46	5	0	2.8	0	32	58	8	2	2.5	3	51	43	3	0

Table 4b. Visual trait assessments – Wool Quality and Pigment

Breeders flock, Sire name	Wool Quality											
	Staple Weathering					Staple Structure						
	Dev	1	2	3	4	5	Dev	1	2	3	4	5
Bindawarra, 080358	-0.1	3	60	35	2	0	-0.1	0	56	44	0	0
Connewarran, 8016	-0.5	17	69	11	3	0	-0.4	6	69	25	0	0
Glenpaen, 080356	-0.2	0	74	26	0	0	-0.1	4	48	48	0	0
Gringegalga, 071609	-0.1	1	55	42	2	0	0.1	0	35	62	3	0
Hazeldean, 8.3561	-0.1	5	50	45	0	0	-0.3	9	50	41	0	0
Koorngal, 102277	0.4	0	25	59	12	4	0.2	0	25	69	6	0
Lachlan Merinos, 08SP30	-0.1	0	65	32	3	0	-0.2	3	54	43	0	0
Leahcim Poll, 090918	0.2	2	27	66	5	0	0.1	0	43	50	7	0
Moojepin, 100248	0.4	0	23	65	8	4	0.5	0	10	73	12	5
Nareeb Nareeb, 100655	-0.1	4	56	34	6	0	-0.1	6	38	56	0	0
Nerstane, 080121	0.0	0	55	42	3	0	0.0	3	36	61	0	0
One Oak No. 2, BL0010	0.0	0	47	53	0	0	0.0	0	47	53	0	0
Pooginook, Clark	0.2	4	37	47	12	0	0.1	5	26	67	2	0
Ridgway Poll, 091137	0.1	2	42	52	4	0	0.1	0	36	62	2	0
Roseville Park, 090014	-0.4	7	78	11	4	0	-0.1	0	59	37	4	0
The Mountain Dam, 11/CWA029	-0.1	3	62	32	3	0	0.1	0	35	62	3	0
Toland Poll, 111021	0.1	0	40	56	4	0	0.2	0	32	60	8	0
Yalgoo, 070441	-0.3	0	82	15	3	0	-0.3	0	75	25	0	0
Yiddinga, 101057	0.4	0	21	67	12	0	0.2	0	27	70	0	3
Average performance	2.5	3	51	42	4	0	2.6	2	42	53	3	0

Breeders flock, Sire name	Pigmentation													
	Fibre pigmentation					Non-fibre pigmentation					Black	Spot		
	Dev	1	2	3	4	5	Dev	1	2	3	4	5	5	5
Bindawarra, 080358	-0.1	92	4	4	0	0	0.2	2	75	21	2	0	0	2
Connewarran, 8016	0.0	86	9	0	3	2	0.1	2	89	7	2	0	0	0
Glenpaen, 080356	-0.1	96	0	0	4	0	-0.1	11	89	0	0	0	0	0
Gringegalga, 071609	0.0	90	7	0	0	3	0.1	5	90	1	2	2	2	0
Hazeldean, 8.3561	0.0	81	15	4	0	0	0.1	3	89	4	4	0	0	0
Koorngal, 102277	1.1	29	44	6	9	12	0.4	5	62	15	18	0	6	0
Lachlan Merinos, 08SP30	-0.2	92	8	0	0	0	-0.1	10	90	0	0	0	0	0
Leahcim Poll, 090918	-0.2	100	0	0	0	0	-0.2	24	76	0	0	0	0	0
Moojepin, 100248	0.0	73	27	0	0	0	0.0	6	88	6	0	0	0	2
Nareeb Nareeb, 100655	-0.1	85	15	0	0	0	0.2	0	82	15	3	0	0	0
Nerstane, 080121	-0.1	86	14	0	0	0	-0.1	16	76	8	0	0	0	0
One Oak No. 2, BL0010	-0.1	97	0	0	0	3	0.0	0	97	3	0	0	0	0
Pooginook, Clark	-0.1	87	13	0	0	0	0.0	6	91	3	0	0	0	0
Ridgway Poll, 091137	0.1	83	13	0	0	4	-0.1	9	89	0	2	0	0	0
Roseville Park, 090014	0.1	78	14	6	2	0	0.2	0	81	19	0	0	0	3
The Mountain Dam, 11/CWA029	-0.1	83	17	0	0	0	-0.1	12	88	0	0	0	0	0
Toland Poll, 111021	0.1	69	31	0	0	0	-0.1	12	88	0	0	0	0	4
Yalgoo, 070441	-0.2	98	2	0	0	0	-0.4	37	63	0	0	0	0	0
Yiddinga, 101057	-0.1	87	13	0	0	0	-0.2	18	82	0	0	0	0	0
Average performance	1.2	84	13	1	1	1	2.0	9	83	5	3	0		

Table 4c, 4d and 4e. **Visual trait assessments – Conformation**

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 – RESEARCHER VERSION 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.

■ Face cover:	Wool cover on the face scored from 1 (open face) to 5 (fully covered face).
■ Jaw:	The alignment of the lower jaw and its teeth relative to the top jaw from 3 (very well aligned) to 5 (heavily overshot) or 1 (heavily undershot).
■ Hocks:	The angulation of the hocks joint from 3 (moderate angulation) to 5 (extreme angulation) or 1 (no angulation).
■ Pastern:	The angulation of the pastern joint from 3 (moderate angulation) to 5 (extreme angulation) or 1 (no angulation).
■ Front Legs:	The orientation of the front legs and feet from 3 (point squarely forward) to 5 (extreme outward orientation) or 1 (extreme inward orientation).
■ Back Legs:	The orientation of the back legs and feet from 3 (straight) to 5 (outward bowed) or 1 (inward bowed).
■ Toes:	The direction and degree of growth of toes on all four feet from 3 (straight and normal) to 5 (severely open or rolled over or long) or 1 (severely crossed over or long).
■ Shoulder:	The soundness of the shoulder blades and their positioning in relation to the neck and spine from 3 (sitting squarely) to 5 (extremely high and wide) or 1 (extremely low and narrow).
■ Back:	The soundness of the back structure from 3 (straight between shoulders and hips) to 5 (extremely arched backline) or 1 (extremely dipped backline).
■ Body wrinkle:	The degree and quantity of body wrinkle from 1 (no wrinkle) to 5 (extensive wrinkle).
■ Neck wrinkle:	The degree and quantity of wrinkle on the neck and apron from 1 (no wrinkle) to 5 (extensive wrinkle).

Table 4c. Visual trait assessments – Conformation

Breeders flock, Sire name	Conformation											
	Face Cover					Jaw						
	Dev	1	2	3	4	5	Dev	1	2	3	4	5
Bindawarra, 080358	0.0	0	5	95	0	0	0.0	0	3	95	2	0
Connewarran, 8016	-0.1	3	19	75	3	0	0.0	0	0	100	0	0
Glenpaen, 080356	0.0	0	4	96	0	0	0.0	0	0	100	0	0
Gringegalgona, 071609	-0.1	0	22	78	0	0	0.0	0	2	98	0	0
Hazeldean, 8.3561	0.0	0	18	77	5	0	-0.1	0	14	86	0	0
Koorringal, 102277	-0.1	0	22	72	6	0	0.1	0	0	97	3	0
Lachlan Merinos, 08SP30	0.0	0	8	92	0	0	-0.1	0	8	92	0	0
Leahcim Poll, 090918	0.0	0	7	91	2	0	0.0	0	2	98	0	0
Moojepin, 100248	-0.4	0	46	54	0	0	0.0	0	6	92	2	0
Nareeb Nareeb, 100655	0.1	0	7	84	9	0	0.0	0	3	97	0	0
Nerstane, 080121	0.1	0	3	97	0	0	0.0	0	3	97	0	0
One Oak No. 2, BL0010	-0.2	0	28	72	0	0	0.0	0	0	100	0	0
Pooginook, Clark	0.2	0	0	86	14	0	0.0	0	2	98	0	0
Ridgway Poll, 091137	0.0	0	8	90	2	0	0.0	0	0	100	0	0
Roseville Park, 090014	-0.1	4	11	81	4	0	-0.1	0	7	93	0	0
The Mountain Dam, 11/CWA029	0.1	0	3	89	8	0	-0.1	0	11	89	0	0
Toland Poll, 111021	0.0	0	8	92	0	0	0.1	0	0	92	4	4
Yalgoo, 070441	0.3	0	3	80	15	2	0.0	0	3	92	5	0
Yiddinga, 101057	0.0	3	6	88	3	0	0.0	0	3	97	0	0
Average performance	2.9	0	12	84	4	0	3.0	0	4	95	1	0

Table 4d. Visual trait assessments – Conformation

Breeders flock, Sire name	Conformation																													
	Front Legs					Back Legs					Hocks					Pasterns					Toes									
	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
Bindawarra, 080358	-0.1	0	4	91	5	0	0.1	0	19	77	4	0	-0.1	0	19	67	14	0	-0.1	0	2	98	0	0	0.2	0	19	79	2	0
Connewarran, 8016	-0.1	2	3	89	6	0	0.0	2	28	67	3	0	0.1	0	0	86	14	0	0.1	0	3	78	19	0	0.0	0	42	56	2	0
Glenpaen, 080356	0.1	0	0	83	17	0	-0.1	0	35	65	0	0	-0.1	0	22	61	17	0	0.1	0	13	57	30	0	0.0	0	43	52	5	0
Gringegalgona, 071609	0.0	0	7	84	9	0	0.2	0	16	75	9	0	-0.1	0	11	80	9	0	-0.2	0	13	82	5	0	0.0	0	44	49	7	0
Hazeldean, 8.3561	0.0	0	0	91	9	0	-0.3	4	55	36	5	0	0.1	0	9	64	27	0	0.0	0	5	77	18	0	-0.1	0	50	45	5	0
Koorinal, 102277	0.1	0	3	81	16	0	-0.1	0	44	47	9	0	0.1	0	6	66	28	0	0.1	0	0	84	16	0	-0.2	0	53	44	3	0
Lachlan Merinos, 08SP30	-0.2	0	11	89	0	0	0.1	0	24	73	3	0	-0.2	0	14	81	5	0	-0.1	0	11	78	11	0	0.3	0	11	84	5	0
Leahcim Poll, 090918	0.1	0	7	75	18	0	0.1	0	27	66	7	0	-0.1	0	11	75	14	0	-0.1	0	11	82	7	0	0.0	0	36	64	0	0
Moojepin, 100248	0.0	0	2	88	10	0	0.3	0	8	77	15	0	0.0	0	12	71	17	0	0.0	0	0	94	6	0	0.0	0	33	67	0	0
Nareeb Nareeb, 100655	0.2	0	3	69	28	0	-0.1	6	44	31	19	0	0.1	0	10	62	28	0	0.2	0	0	72	28	0	-0.2	0	50	50	0	0
Nerstane, 080121	0.0	0	0	94	6	0	0.2	3	15	73	9	0	-0.1	0	18	70	12	0	0.0	0	3	85	12	0	0.1	0	24	73	3	0
One Oak No. 2, BL0010	0.0	0	0	97	3	0	0.1	0	31	59	10	0	0.0	0	12	69	19	0	0.2	3	0	69	25	3	0.0	0	41	56	3	0
Pooginook, Clark	0.1	0	0	84	16	0	-0.2	0	51	44	5	0	0.1	0	3	74	23	0	0.0	0	0	91	9	0	0.1	0	26	70	4	0
Ridgway Poll, 091137	0.0	0	4	84	12	0	0.1	0	24	68	8	0	-0.1	0	14	70	16	0	-0.1	0	6	88	6	0	0.0	0	34	62	4	0
Roseville Park, 090014	0.0	0	0	93	7	0	-0.1	8	33	48	11	0	0.2	0	0	74	26	0	0.1	0	7	67	26	0	-0.1	4	44	48	4	0
The Mountain Dam, 11/CWA029	-0.1	0	8	92	0	0	0.0	0	38	54	8	0	-0.1	0	16	68	16	0	-0.1	0	11	78	11	0	-0.2	0	57	41	2	0
Toland Poll, 111021	-0.1	0	4	96	0	0	0.1	0	28	60	12	0	-0.1	0	12	76	12	0	-0.1	0	4	92	4	0	0.3	0	8	92	0	0
Yalgoo, 070441	0.0	0	5	80	15	0	-0.2	3	52	40	5	0	0.1	0	5	75	20	0	0.1	0	3	75	22	0	-0.2	4	48	48	0	0
Yiddinga, 101057	0.0	0	0	97	3	0	-0.2	0	52	42	6	0	0.2	0	6	61	33	0	0.1	0	3	70	27	0	0.0	0	36	64	0	0
Average performance	3.1	0	3	87	10	0	2.7	1	33	58	8	0	3.1	0	11	71	18	0	3.1	0	5	80	15	0	2.7	0	37	60	3	0

Table 4e. Visual trait assessments – Conformation

Breeder's flock, Sire name	Conformation																							
	Back					Shoulder					Body Wrinkle					Neck 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
Bindawarra, 080358	0.1	0	16	79	5	0	0.0	0	14	67	19	0	-0.3	11	70	19	0	0	-0.2	14	49	37	0	0
Connawarran, 8016	0.0	0	22	75	3	0	0.0	0	8	75	17	0	0.1	3	50	47	0	0	0.2	3	33	61	3	0
Glenpaen, 080356	0.0	4	13	83	0	0	0.0	0	22	52	26	0	0.2	0	45	55	0	0	0.3	0	27	73	0	0
Gringegalgon, 071609	0.0	0	20	78	2	0	0.0	2	9	65	24	0	0.3	2	36	60	2	0	0.1	2	45	51	2	0
Hazeldean, 8.3561	0.1	0	18	77	5	0	0.2	0	4	64	32	0	0.3	0	38	57	5	0	0.2	0	52	33	15	0
Koorngal, 102277	-0.1	3	28	66	3	0	0.4	0	9	31	56	4	0.0	0	59	41	0	0	-0.1	3	56	41	0	0
Lachlan Merinos, 08SP30	0.1	0	16	81	3	0	-0.1	0	19	65	16	0	-0.3	8	81	11	0	0	-0.3	6	72	22	0	0
Leahcim Poll, 090918	0.0	2	23	75	0	0	-0.1	0	23	59	18	0	-0.7	38	62	0	0	0	-0.7	27	73	0	0	0
Moojepin, 100248	0.1	3	12	83	2	0	0.0	2	10	65	23	0	-0.6	26	74	0	0	0	-0.4	8	83	9	0	0
Nareeb Nareeb, 100655	-0.2	4	34	62	0	0	-0.2	0	22	62	16	0	0.2	0	48	45	7	0	0.5	0	24	61	15	0
Nerstane, 080121	0.0	0	21	76	3	0	-0.1	0	21	58	21	0	0.3	0	39	52	9	0	0.2	0	35	61	4	0
One Oak No. 2, BL0010	0.0	3	19	78	0	0	0.1	0	3	72	25	0	0.2	0	44	53	3	0	0.0	6	44	50	0	0
Pooginook, Clark	-0.1	0	30	67	3	0	0.2	0	16	44	37	3	0.4	0	33	63	4	0	0.1	7	37	53	3	0
Ridgway Poll, 091137	-0.1	0	32	66	2	0	0.0	0	22	50	28	0	-0.2	8	73	16	3	0	-0.5	16	71	13	0	0
Roseville Park, 090014	0.0	0	26	74	0	0	-0.1	0	19	67	11	3	0.0	0	59	41	0	0	0.0	0	59	41	0	0
The Mountain Dam, 11/CWA029	0.0	0	22	78	0	0	-0.2	0	16	78	6	0	0.2	0	49	51	0	0	0.2	3	38	51	8	0
Toland Poll, 111021	0.1	0	16	80	4	0	0.1	0	12	60	28	0	-0.4	12	84	4	0	0	-0.3	4	80	16	0	0
Yalgoo, 070441	-0.2	0	43	57	0	0	-0.3	3	28	57	12	0	0.1	4	48	48	0	0	0.1	3	45	52	0	0
Yiddinga, 101057	0.1	0	21	70	9	0	0.2	4	9	48	36	3	0.4	0	26	71	3	0	0.6	0	11	71	18	0
Average performance	2.8	1	23	74	2	0	3.1	0	15	60	24	1	2.4	6	54	39	1	0	2.4	5	49	42	4	0

Table 4f. Visual trait assessments – Breech

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 – RESEARCHER VERSION 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.

For the majority of breeder's objectives a negative deviation would be considered favourable and the larger the deviation the better, for Breech Traits.

■ 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 Stain	Degree of urine stained wool in the breech area, including the hind legs from 1 (nil) to 5 (extensive).

Table 4f. Visual trait assessments – Breech

Breeders flock, Sire name	Breech Visual Traits																													
	Breech Cover Marking						Crutch Cover					Breech Wrinkle Marking					Dag Yearling - mulesed					Urine Stain								
	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
Bindawarra, 080358	0.1	0	7	17	21	55							-0.1	38	34	26	2	0	0.8	1	24	29	17	29						
Connewarran, 8016	0.0	0	0	27	27	46							0.4	12	44	32	12	0	0.2	18	21	36	12	13						
Glenpaen, 080356	0.2	0	0	8	46	46							0.0	31	38	31	0	0	-0.7	33	50	9	0	8						
Gringegalga, 071609	0.3	0	0	5	40	55							0.1	21	47	29	3	0	-0.3	22	35	30	9	4						
Hazeldean, 8.3561	-0.2	0	0	30	43	27							0.1	26	35	35	4	0	0.3	10	29	38	4	19						
Koorinal, 102277	-0.5	4	9	30	27	30							-0.1	27	55	18	0	0	-0.2	9	53	19	16	3						
Lachlan Merinos, 08SP30	-0.5	0	9	39	26	26							-0.4	50	39	8	3	0	-0.4	22	54	11	5	8						
Leahcim Poll, 090918	-0.1	0	2	21	44	33							-0.7	71	27	2	0	0	-0.5	26	48	14	10	2						
Moojepin, 100248	-0.6	2	10	31	39	18							-0.9	84	16	0	0	0	-0.1	8	55	17	9	11						
Nareeb Nareeb, 100655	0.2	0	0	13	34	53							0.2	22	34	38	6	0	0.6	7	32	13	29	19						
Nerstane, 080121	0.0	0	0	23	40	37							0.3	23	34	29	11	3	0.0	9	42	27	15	7						
One Oak No. 2, BL0010	-0.1	0	6	19	33	42							0.0	33	39	25	0	3	0.0	13	39	26	16	6						
Pooginook, Clark	0.3	0	0	9	33	58							0.5	11	38	42	7	2	0.5	9	26	30	14	21						
Ridgway Poll, 091137	0.2	0	0	6	49	45							-0.4	53	26	21	0	0	-0.1	14	41	27	14	4						
Roseville Park, 090014	0.1	0	0	20	29	51							0.0	31	43	17	9	0	0.5	3	30	26	30	11						
The Mountain Dam, 11/CWA029	0.0	0	0	25	31	44							0.3	16	38	46	0	0	0.1	11	34	31	14	10						
Toland Poll, 111021	0.2	0	0	4	56	40							-0.3	36	52	12	0	0	-0.3	16	44	32	4	4						
Yalgoo, 070441	0.1	0	0	18	33	49							0.6	11	33	44	7	5	-0.4	18	46	23	13	0						
Yiddinga, 101057	0.3	0	0	14	24	62							0.4	16	32	41	11	0	0.2	7	39	27	21	6						
Average performance	4.2	0	2	19	36	43							2.0	32	37	26	4	1	2.7	14	39	24	13	10						

Table 5. Sire averages for measured traits

Sire averages are the average performance of all the progeny of a sire. No account is made for factors that can improve the breeding value accuracy.

Breeders flock, Sire name	Number of progeny	Sire averages for measured traits (deviations from the site average)									
		GFW	CFW	FD	WT			FDCV	Curv	SL	SS
		kg A [^]	kg A	µm A	W	Y	A	% A	deg/mm A	mm A	N/ktex A
Bindawarra, 080358	39	0.0	0.0	0.3	0.1	-1.4	-0.6	-0.6	0.5	-0.4	0.2
Connewarran, 8016	34	-0.2	-0.1	-0.2	-0.5	-0.8	-2.0	-1.1	3.4	-6.4	-1.3
Glenpaen, 080356	23	0.1	0.0	0.2	-1.4	-1.1	-1.3	-0.1	1.9	-0.4	5.3
Gringegalgona, 071609	52	0.5	0.4	0.1	0.6	0.8	2.1	-0.3	0.5	3.1	0.7
Hazeldean, 8.3561	21	0.2	0.1	-0.7	1.0	-0.3	0.1	0.2	0.6	5.7	0.4
Koorngal, 102277	30	-0.1	-0.1	0.0	-0.8	-1.9	-2.7	1.0	-1.0	-2.5	-1.2
Lachlan Merinos, 08SP30	35	-0.1	-0.1	0.3	2.4	3.7	6.0	-0.4	2.5	3.9	-0.7
Leahcim Poll, 090918	43	-0.5	-0.3	0.3	-0.2	-1.0	-1.0	-1.0	-0.4	4.8	-0.7
Moojepin, 100248	48	-0.1	-0.1	1.3	1.4	2.9	4.9	0.0	-8.0	12.2	2.2
Nareeb Nareeb, 100655	32	0.4	0.4	0.3	-1.0	0.7	-2.6	0.6	1.0	-3.3	4.9
Nerstane, 080121	31	0.1	0.1	-0.7	-0.7	-1.8	-3.4	0.4	-1.1	2.4	-4.5
One Oak No. 2, BL0010	32	0.2	0.1	-0.1	0.5	1.3	3.3	-0.3	1.2	-2.3	4.3
Pooginook, Clark	42	0.2	0.0	0.1	-0.4	-0.3	-1.3	1.9	0.9	-4.6	-3.9
Ridgway Poll, 091137	50	0.1	0.2	0.2	-1.3	0.6	0.9	-0.1	-2.9	4.0	2.8
Roseville Park, 090014	27	0.1	0.0	-0.1	-0.8	0.5	0.2	0.4	0.4	-5.7	-1.0
The Mountain Dam, 11/CWA029	35	-0.3	-0.2	0.1	1.1	-0.2	-1.5	-0.5	0.7	1.4	0.8
Toland Poll, 111021	25	0.0	-0.1	0.6	1.4	1.3	2.9	0.0	-7.3	2.4	-0.9
Yalgoo, 070441	40	-0.7	-0.5	-1.7	-0.8	-2.2	-2.8	-0.5	9.3	-9.7	-7.7
Yiddinga, 101057	30	0.1	0.2	-0.1	-0.7	-0.9	-1.0	0.6	-2.1	-4.6	0.1
Average performance	36	4.5	3.2	17.4	23.9	26.0	39.6	19.5	91.4	83.2	58.9

[^] 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

Index Options

Breeding Objective index options provide the relative value of sires based on a combination of the measured traits' genetic performance. The indexes used in this report are only some of the many indexes that can be used to describe an individual breeder's objective for measured traits.

If a breeder is considering using a sire in this report it is critical to consider the performance of the breeder's flock relative to the performance standard in this report. The relative performance must be considered to establish the result that can be expected when a sire is used in a breeder's flock.

All AMSEA site evaluation reports present 3 standard indexes to provide combined measured trait performance. These 3 AMSEA indexes are DP+; MP+; and FP+. These indexes are the same as MERINOSELECT indexes of that name however as there is no direct reproduction records captured by sire evaluation AMSEA do not include a Reproduction (NLW) FBV in their index calculations. As a result the 21% contribution by NLW in the DP+ index is not effectively applied by the index calculation.

This report has added an additional index – the AMSEA Fine 20%+ SS.

AMSEA
DP+

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

AMSEA
MP+

Merino Production Plus: Based on a balanced wool and meat production system where surplus progeny are sold as hoggets. Large increase in fleece weight. Small increase in staple strength, carcass traits and reproduction. Moderate reduction in fibre diameter.

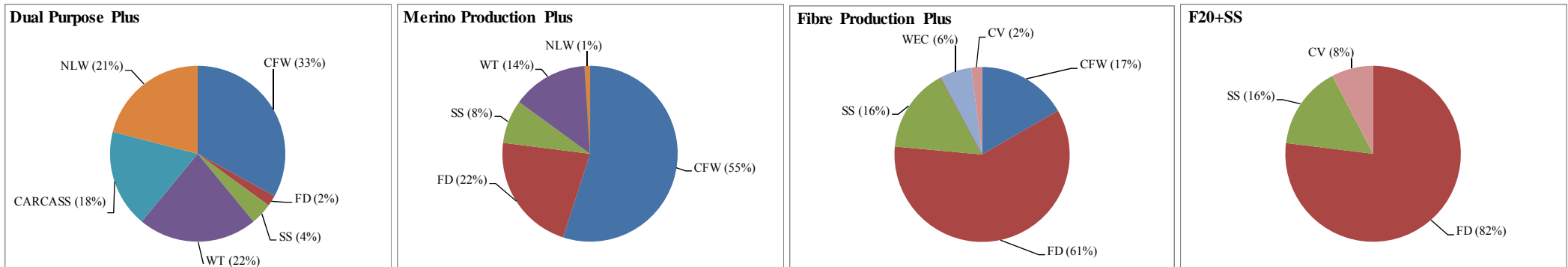
AMSEA
FP+

Fibre Production Plus: Based on a wool focussed 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 carcass traits and reproduction.

AMSEA
Fine20%+SS
(F20% +SS)

High emphasis on fibre diameter and staple strength. There is adequate emphasis on other traits to maintain performance except a moderate reduction in reproduction (number of lambs weaned – NLW).

Traits contribution to economic gain: The percentage contribution of the traits listed to economic gain in a commercial flock that selects sires using the index.



Understanding the results

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.

Combined measured trait and combined visual trait performance

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



Elders Balmoral Victoria Sire Evaluation Group

2012 Drop