Elders Victoria Sire Evaluation Group

Central Test Sire Evaluation

2010 Drop First & Final Assessment

Conducted by
Elders Victoria Sire Evaluation Group

under the auspices of

The Australian Merino Sire Evaluation Association

with support from

Gold Sponsor:

Bronze Sponsors:

July 2012

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Foreword

Elders Victoria Sire Evaluation Group Central Test Sire Evaluation

The Elders Victoria Sire Evaluation 2010 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 (1998-2012), 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" and "Yiddinga" to inspect progeny and to discuss the sire evaluation program with interested woolgrowers.

Prior to 1998, there were three previous trials in the Balmoral/Hamilton district, which are recorded in Merino Superior Sires as B95, HT93, HT94. In 1998 a small group of stud breeders met to form what is now known as the Elders Victoria Sire Evaluation Group. The Sire Evaluation Trials commenced in 1998 and as of this year there will be 15 progeny drops: 1998 -2012. All trials are run for a minimum of 2 years.

The 1998 drop wethers continued to be assessed for the further 2 years (a total of 4 assessments) outside the Central Test Evaluation program as part of a PIRD (Producer Initiated Research Development) Program which determined that mature age assessments averaged across each sire group provide similar information to the two-year trial data and in particular show clear trends and confidence with the second year assessment information.

- 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 commencing with the 2008 drop 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.

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

Host Properties

The 2010 & 2011 drop evaluation was hosted at "Yiddinga", Edenhope. (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 & hopefully 2013 drop – Host property "Wando Estate" , Casterton

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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July 2012

2009 drop First & Final Assessment

The information in this site evaluation report provides a comprehensive assessment of the 2010 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.

Three graphs and a table provide a summary of the results. Eight tables provide the detailed performance information

Contents

Sire and owner details

Elders Victoria Sire Evaluation 2010 drop First & Final Assessment, 20 months of age, 12 months wool growth.

Sire and owner details

Ram code	Breeders flock, Ram number Ram ID #, Breed †	Contact name, address Phone, fax, email
1*	**Billandri Poll, 070380** 60-0571-2007-070380, Poll Merino	**Bill Sandilands,** Billandri Kendenup WA 6323 Ph: 08 9851 4030 F: 08 9851 4264 E: csandilands@bordernet.com.au
2	**Centre Plus Poll, 607065** 60-1250-2006-607065, Poll Merino	**Robert Mortimer,** Centre Plus, Deveondale Tullamore, NSW 2874 Ph: 02 6892 8259 E: rmortimer@crt.net.au
3	**Connewarran, 8002** 50-4704-2008-008002, Merino	**Richard Weatherly**, Connewarran, PO Box 21, Mortlake Vic 3272 Ph:03 5599 7276 F:03 5599 7227 E:connewarran@westvic.com.au
4*	**Glenlea Park Poll, 070706** 60-1382-2007-070706, Poll Merino	**Angus McLachlan**, PO Box 20, Mt Pleasant SA 5235 Ph:08 8568 2002 F:08 8568 2403 E:aamcl@bigpond.net.au
5	**Hannaton, 080002** 50-1694-2008-080002, Merino	**Peter Hicks** Hannaton Partnership, PO Box 22 Kaniva Vic 3419 P: 03 5392 2366 F: 03 5392 2938 E: peter@hannaton.com.au
6	**Kerrsville Poll, 060436** 60-1217-2006-060436, Poll Merino	**Rob Plush** Kerrsville Pastoral Company, Coleraine Vic 3315 P: 03 5575 0208 F: 03 5575 0208 E: rjplush@bigpond.com
7 UR	**Kia Ora, 6051** 50-9221-2006-060151, Merino	**Brendan & Susan Finnigan**, PMB 1780, Warrnambool VIC 3280 Ph:03 5569 2079 F:03 5569 2079 E:kiaora@westvic.com.au
8	**Kurra-Wirra, BZ5000** 50-4173-2007-BZ5000, Merino	**Robert Close**, 770 Moree Culla Road, Coleraine Vic 3315 Ph:03 5570 4238 F:03 5570 4234 E:kurrawirra@skymesh.com.au
9	**Lachlan Merinos, 80SP30** 50-5022-2008-080030, Merino	**Glen Rubie** Meadowbank, Warroo Bridge Rd, Forbes NSW 2871 P: 02 6857 2118 F: 02 6857 2162 E:lachlanmerinos@activ8.net.au
10	**Mokanger, B23** 50-4888-2008-000023, Merino	**Shane Arnold**, Mokanger Pastoral Co, Cavendish Vic 3314 Ph:03 5574 2367 F:03 5574 2328 E:mokanger2@bigpond.com
11	**Nareeb Nareeb, 08411** 50-0246-2008-120411, Merino	**Richard Beggs,** Nareeb Nareeb, Glenthompson Vic 3293 P: 03 5577 8222 F: 03 5577 8362 E: office@nareebnareeb.com.au
12*	**Pooginook, Ranger** 50-0788-2008-082065, Merino	**John Sutherland** Paraway Pastoral Company Ltd, Jerilderie NSW 2716 P: 02 6954 6145 F: 02 6954 6168 E: pooginook@parawaypastoral.com
13*	**Roseville Park, 070949** 51-0003-2007-070949, Dohne	**Graham Coddington,** "Eulandool" 54R The Springs Rd, Dubbo NSW 2830 P: 02 6887 7234 E: rpmerinos@bigpond.com
14	**The Mountain Dam, 08/NBJ012** 50-4572-2008-NBJ012, Merino	**Tom and Alison Silcock**,The Mountain Dam, 429 Silcocks Road, Telangatuk East Vic 3401 Ph:03 5388 2238 F:03 5388 2235 E:themountaindam@bigpond.com
15	**Uardry, 050068** 51-0030-2005-050068, Dohne	**Ben Lane (Manager)** Charles Mills (Uardry) Pty Ltd, Uardy, Hay NSW 2711 P: 02 6993 5101 E: ben.lane@uardry.com
16	**Yiddinga, BLK 84** 50-9242-2005-050084, Merino	**Jim Farran,** Yiddinga, PO Box 222, Edenhope Vic 3318 Ph: 03 5585 1888 F: 03 5586 6214 E: jim.farran@bigpond.com
17	**Yulong Poll, 060624** 60-0766-2006-060624, Poll Merino	**Peter Rogers** Rogers Partnership, 2266 Telangatuk Rocklands Rd, Telangatuk East, Vic 3401 Ph: 03 5388 2257 E: yulong@activ8.net.au

***** Link ram: Ram 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.*

UR Unregistered Flock. Sires bred in an unregistered flock are identified in the table by a UR following the sire's code.

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 2010 drop progeny and location

- The property of "Yiddinga" is owned Yiddinga Holdings Pty Ltd with its principle being Andrew Farran and managed by Jim Farran. Located 7 kilometres south west of the Edenhope township, the soil type is varied ranging from sandy to clay loams, it is typically Western Victorian Red Gum country, with areas of wetlands. Management emphasis is placed on improved pastures with use of Phalaris, Balansa clover and sub clover.
- Longterm average annual rainfall is approximately 575mm.

Selection and mating

- The Yiddinga ewes selected by visual assessment first then with the use of laser scanning and 14% index, sheep are a Merryville type with sires from various studs used.
- The average adult flock micron at "Yiddinga" in 2010 was 18.2 micron.
- Laparoscopic insemination of 952 ewes was conducted by David Kennett from Genstock Breeding Services from Hamilton on 13th 14th and 15th April 2010 with 56 ewes allocated to each sire.
- 17 sires participated in the sire evaluation.
- All ewes were in condition score 2.7-3.1 at the time of insemination.

Pregnancy and lambing

- Ultrasound scanning of ewes on 16th June 2010 was carried out by Mark Jenkins of SheepPro livestock services with a total of 1107 possible lambs twins and singles all triplet bearing ewes were removed from the trial.
- Single and twin bearing ewes were run in two separate mobs and then drafted into 34 sire paddocks on 1st of September 2010 ready for lambing.
- The lambs were double tagged (RFID tag and a numbered sire tag) on 27th and 28th of September and recorded for birth type, sex, skin and fibre pigmentation, black spots, hairy birth coat and entropian. The ewes were then run in two separate management groups being twin lambs and single lambs until weaning then they were run as one mob for the rest of the trial.
- The lambs were scored for breech cover and breech wrinkle at marking time.
- Single bearing ewes were run on 1800kg/ha DM whilst the twin bearing ewes were run on 2400 kg/ha DM, the ewes condition score ranged from 2.4 to 2.8.

Weaning and seasonal conditions

- Lambs were marked and mulesed on 18th October 2010.
- The lambs were imprint fed on a ration of oats and beans prior to weaning.
- A total of 645 lambs were weaned on 24th of November 2010 with an average weaning weight of 21.6 kgs.
- Lambs were weaned onto short seed free pastures comprising phalaris and sub clover, hand feeding was commenced within a few days of weaning. With the large amount of summer rainfall that occurred in the summer of 2010/2011, ongoing hand feeding was not required. The wet warm conditions created sheep blowfly problems through the summer requiring jetting twice, with some deaths and production loses.
- The weaners were shorn on the 20th of April with fleece weights recorded and mid side samples collected.
- The seasonal conditions in the summer and autumn of 2011/2012 were in contrast to the previous year requiring hand feeding of barley from early February to the end of June.

Assessments

- Yearling body weights were taken by the committee in October 2011 and adult body weights were taken on the 16th May 2012
- WECs were collected by the committee in July 2011 and processed by Dr David Rendell.
- Visual classing was undertaken by Andrew Combe and Steph Brooker-Jones of Elders.

- Fleece mid side samples were processed by Paul Cocking of Riverina Wool Testers.
- Fleece weights were collected at shearing on 23rd April 2012, with wool types provided by Roly Coutts of Elders.
- Muscle scanning was carried out by Stephen Spiker on the 11th June 2012.

Rainfall

The following rainfall records have been kept and maintained by Yiddinga.

	Yiddinga, Edenhope, Victoria Rainfall (mm per month) *						
Month	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**Average**
January	36	92.5	14	1.5	8.5	115	44.5
February	28.5	2	6	0	54.5	70	26.8
March	33.5	11.5	16.5	25.5	27.5	73	31.2
April	35.5	41.5	25	14.5	37.5	36	31.6
May	34	105.5	51.5	22.5	43	38	49
June	10.5	21	32.5	43	60	47	35.6
July	52	70.5	67	87.5	38	77.5	65.4
August	28	37	58.5	106	122.5	92.5	74
September	38	46.5	57.5	72	61	32.5	51
October	5	22.5	12.5	34	34.5	39.5	24.6
November	7.5	44	26.5	33	61.5	20.5	32
December	8.5	36.5	100.5	22	177.5	22	61
Total	317	531	468	455.5	726	663.5	526

* Source: "J. Farran Yiddinga"

Reported by: Jim Farran

Assessment and management program

Activity		Date/s	Age	Wool
Selection of ewes		February		
Allocation of ewes for mating		April 2010		
Pregnancy scanning		16 June 2010		
Separated into sire lambing groups		1st September 2010		
Lambing: start – finish		1-8 September 2010		
Lambing mobs boxed to one management group		20 September 2010	21 days	
Tagging, pigmentation and breech scoring		20 September 2010	21 days	
Marking and mulesing		18 October 2010	50 days	
Weaning		5 January 2011	120 days	
Pre assessment (even-up) shearing		19 April 2011	7.5 months	7.5 months
Crutching		28th November 2011	14 months	7 months
Mid side fleece sampling	• 1st Assessment:	26 March 2012	18 months	11 months
Visual trait scoring	• 1st Assessment:	26 March 2012	18 months	11 months
Classer's Grade	• 1st Assessment:	26 March 2012	18 months	11 months
Assessment shearing	• 1st Assessment:	23 April 2012	19 months	12 months
Fat and eye muscle scanning	• 1st Assessment:	11 June 2012	21 months	1.5 months
Body weighing	• Weaning:	5 January 2011	120 days	
	• Yearling:	3 October 2011	13 months	
	• Adult:	16 May 2012	20 months	
	• Adult:	11 June 2012	21 months	
Worm egg count sampling	• 1st Assessment:	30 May 2011	9 months	
Vaccination	6:1 & OJD at marking 18th October 2010, booster 6:1 at weaning			
Drench	Worm burdens monitored and progeny drenched when egg counts reached >300. (Drenched approx 6 times during trial, including a summer drenching program)			
Jetting	Jetted twice during summer 2011/2012 (see report above)			
Supplementary feeding	Oats, Beans and Barley (see report above)			
Field day or public display of 2010 drop sheep	■ Field Day & Progeny Display at Yiddinga/Mokanger – April 2011 ■ Field Day & Progeny Display at Yiddinga – April 2012 ■ Display at Hamilton Sheepvention – August 2011 & 2012 ■ Progeny Display at Balmoral Show – 2012 & 2013 ■ Display at Australian Sheep & Wool Show - Bendigo – July 2011 & 2012			

Visual trait assessment and site Breeding Objective

Visual trait assessment

1st and final assessment

Classer's Grade: Mr David Whyte, 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.

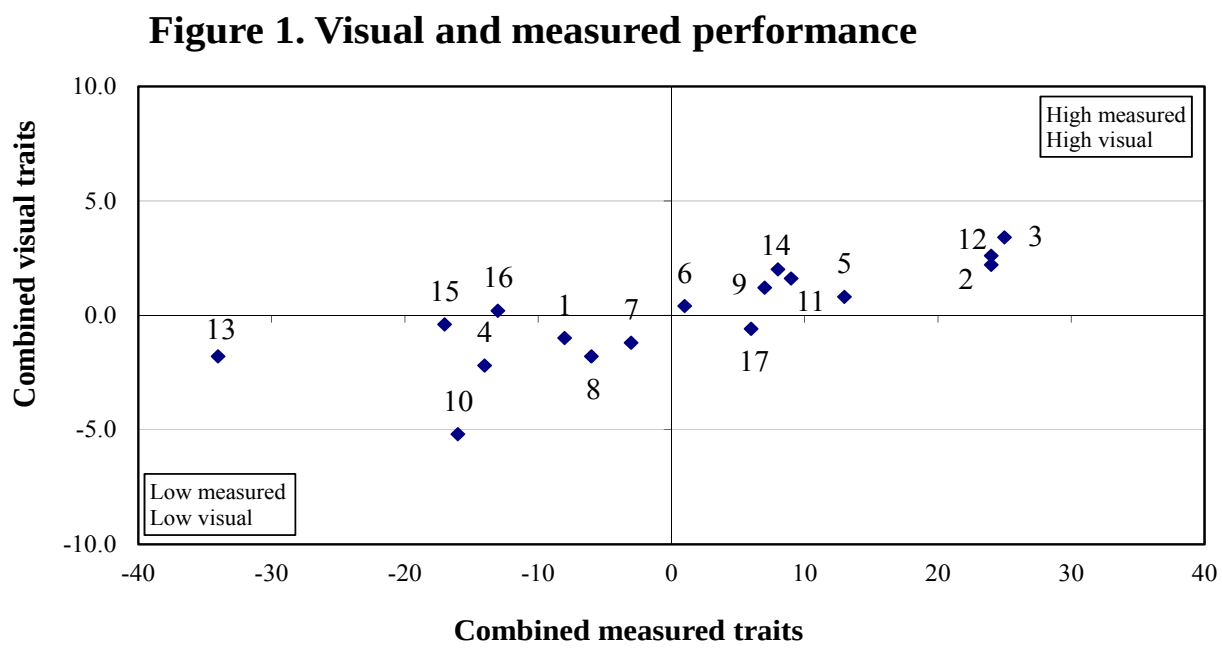
Figure 1. **Combined measured traits and visual performance**

Summary graph: Visual and measured performance

Each sire that had 20 or more progeny assessed is located on the graph. The graph describes performance for combined measured traits and combined visual assessment.

Figure 1 is combined measured traits based on an AMSEA <u>Merino 7% index</u> (that is: equal emphasis on fleece weight and fibre diameter with enough emphasis on body weight to provide a moderate increase in this trait). Visual trait performance is a combination of Classer's Grade performance (Tops and Culls). More information is found in "Understanding the Results" (pages 21-22).

Sires that are above average performers for combined measured traits and Classer's Grade are located in the <u>top right hand quarter</u>.



Ram code	Breeders flock, Ram number	Sheep Genetics ID
1*	Billandri Poll, 070380	600571-2007-070380
2	Centre Plus Poll, 607065	601250-2006-607065
3	Connewarran, 8002	504704-2008-008002
4*	Glenlea Park, 070706	601382-2007-070706
5	Hannaton, 080002	501694-2008-080002
6	Kerrsville Poll, 060436	601217-2006-060436
7 UR	Kia Ora, 060151	509221-2006-060151
8	Kurra-Wirra, BZ5000	504173-2007-BZ5000
9	Lachlan Merinos, 80SP30	505022-2008-080030
10	Mokanger, B23	504888-2008-000023
11	Nareeb Nareeb, 80411	500246-2008-120411
12*	Pooginook, Ranger	500788-2008-082065
13*	Roseville Park, 070949 (Dohne)	510003-2007-070949
14	The Mountain Dam, 08/NBJ012	504572-2008-NBJ012
15	Uardry, 050068 (Dohne)	510030-2005-050068
16	Yiddinga, BLK 84	509242-2005-050084
17	Yulong Poll, 060624	600766-2006-060624

Table A. AMSEA Index values and Classer's Grade

The highest performing 3 sires for each trait (i.e., trait leaders) are highlighted by shading, eg. In the table below see Sire 3 has 14% above average for Tops % .
Each sire is listed for Classer's Grade and the same three indexes at all site evaluations. An additional index (Fine 20%+SS) 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' on page 21 for more information on the indexes presented in the table below.

Ram code	Breeders flock, Ram number	Number of progeny	AMSEA Index Values				Classer's Grade	
			Merino 14%+SS	*Fine 10%+SS*	*Dual Purpose 7%*	*Fine 20%+SS*	Tops % (dev)	Culls % (dev)
1*	Billandri Poll, 070380	50	99	93	108	101	-4	1
2	Centre Plus Poll, 607065	39	114	124	127	112	8	-3
3	Connewarran, 8002	46	120	127	130	118	14	-3
4*	Glenlea Park, 070706	41	91	84	94	90	-9	2
5	Hannaton, 080002	48	100	108	117	94	4	0
6	Kerrsville Poll, 060436	33	105	103	109	107	-6	-8
7 UR	Kia Ora, 060151	40	97	98	83	98	-4	2
8	Kurra-Wirra, BZ5000	30	92	91	80	89	-5	4
9	Lachlan Merinos, 80SP30	40	106	105	110	106	2	-4
10	Mokanger, B23	51	96	90	72	102	-7	19
11	Nareeb Nareeb, 80411	43	102	108	99	100	4	-4
12*	Pooginook, Ranger	28	119	126	99	118	4	-9
13*	Roseville Park, 070949 (Dohne)	33	69	58	88	67	-6	3
14	The Mountain Dam, 08/NBJ012	27	105	110	98	106	10	0
15	Uardry, 050068 (Dohne)	51	87	79	122	87	-3	-1
16	Yiddinga, BLK 84	46	94	90	75	97	1	0
17	Yulong Poll, 060624	47	100	106	97	99	-2	1
	Average performance	**41**	**100**	**100**	**100**	**100**	**13**	**8**

* Link ram: Ram evaluated to provide links between site evaluations and sites so that the all site results can be combined into a single report, e.g., *Merino Superior Sires.*

UR Unregistered Flock. Rams bred in an unregistered flock are identified in the table by a UR following the ram's code.

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. Rams that are above average for fleece weight and below average fibre diameter are located in the top left hand quarter.

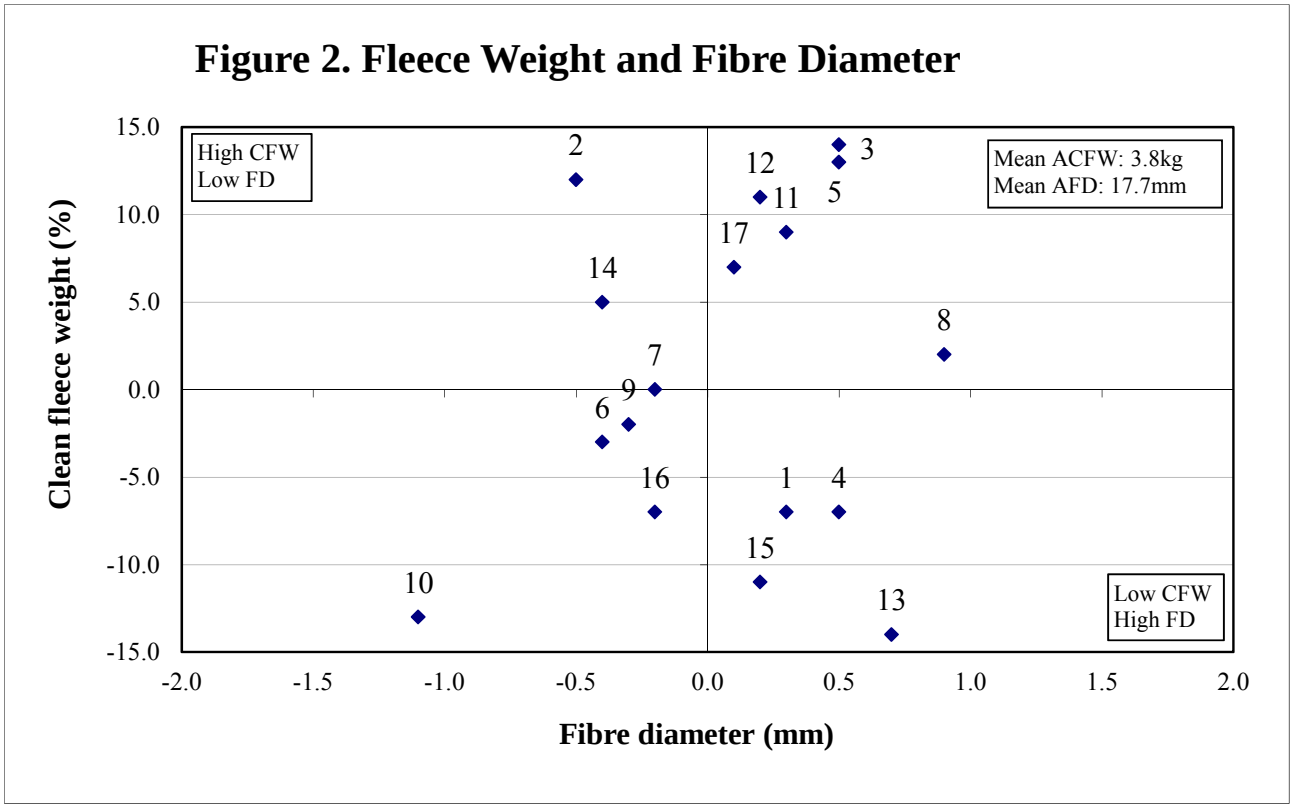
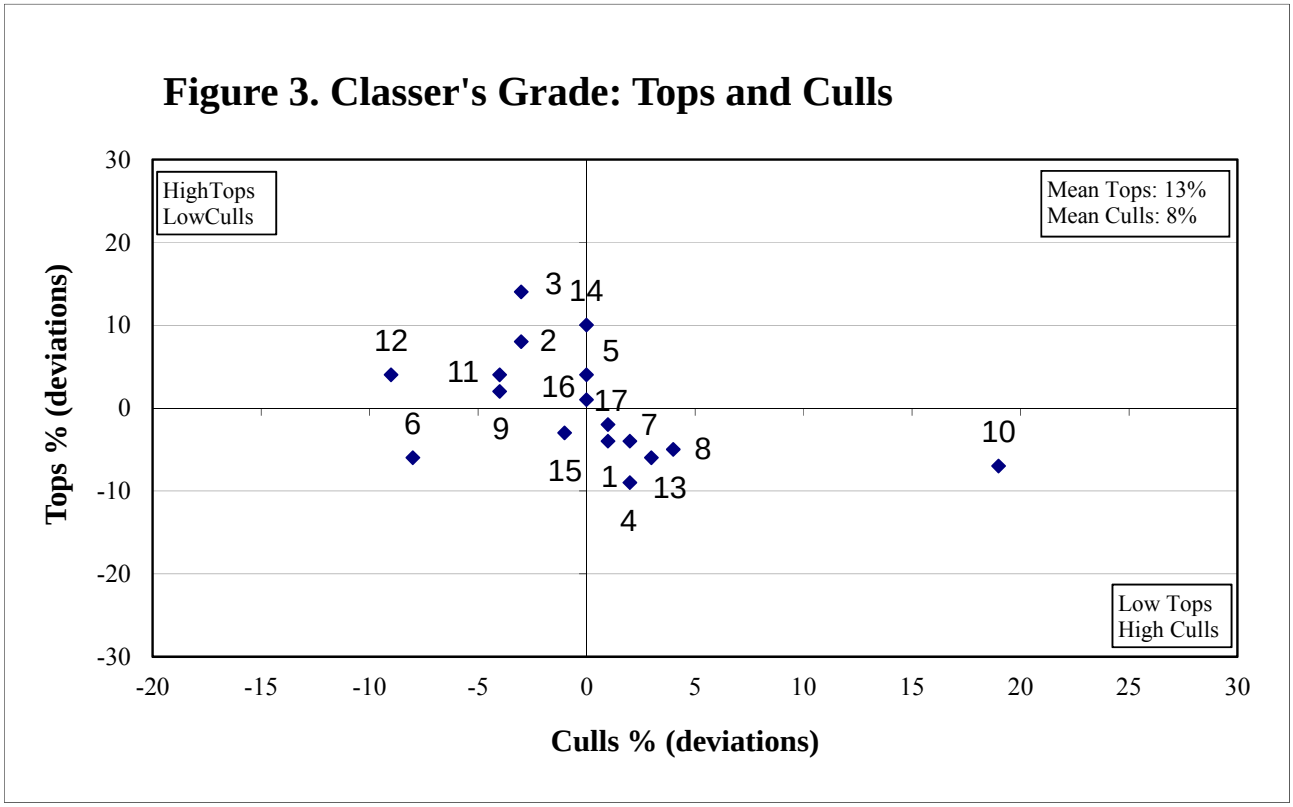


Figure 3. Classer's Grade: Tops and Culls
The graph describes performance for Classer's Tops Grade on the side axis and Classer's Cull Grade on the bottom axis. Rams that have above average Tops and below average Culls are in the top left hand quarter.



Understanding the results

Measured trait performance and Classer's Grade – Tables 1 and 2 – pages 13 and 14

Ram code:	Allows a ram to be located on the summary graphs and some tables.
Breeders flock, Ram number:	Identity of the breeder's flock and the ram's number or name.
Number of progeny:	The number of progeny a ram 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 ram'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 rams (in this case based on the performance of their progeny). A ram's progeny will express half of their ram's FBV. FBVs do not necessarily reflect the rams 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 ram'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 (page 8). The percentage deviation from the average of Tops and Culls is presented in this report.

Table 1. **Major measured traits and Classer's Grade**

Ram code	Breeders flock, Ram number	Number of progeny	Flock Breeding Values (deviations)						Classer's Grade[1]	
			GFW %	CFW %	FD um	WT *kg*			Tops %	Culls %
			A^	*A*^	*A*^	*W*^	*Y*^	*A*^	*A*^	*A*^
1*	Billandri Poll, 070380	50	-6	-7	0.3	-0.2	0.2	-0.1	-4	1
2	Centre Plus Poll, 607065	39	11	12	-0.5	0.4	1.7	1.8	8	-3
3	Connewarran, 8002	46	13	14	0.5	0	1	1.1	14	-3
4*	Glenlea Park, 070706	41	-6	-7	0.5	-0.1	0.6	0.5	-9	2
5	Hannaton, 080002	48	11	13	0.5	-0.3	1.5	2.0	4	0
6	Kerrsville Poll, 060436	33	-2	-3	-0.4	0.7	1.2	1.5	-6	-8
7 UR	Kia Ora, 060151	40	0	0	-0.2	-0.6	-2.4	-3.5	-4	2
8	Kurra-Wirra, BZ5000	30	2	2	0.9	-0.7	-1.6	-2.2	-5	4
9	Lachlan Merinos, 80SP30	40	-1	-2	-0.3	3.7	5.5	6.6	2	-4
10	Mokanger, B23	51	-12	-13	-1.1	-2.4	-4.3	-5.3	-7	19
11	Nareeb Nareeb, 80411	43	10	9	0.3	0.1	-0.6	-0.2	4	-4
12*	Pooginook, Ranger	28	10	11	0.2	0.8	0.2	-0.2	4	-9
13*	Roseville Park, 070949 (Dohne)	33	-13	-14	0.7	1.6	3.1	3.8	-6	3
14	The Mountain Dam, 08/NBJ012	27	4	5	-0.4	-1.7	-1.7	-2.1	10	0
15	Uardry, 050068 (Dohne)	51	-9	-11	0.2	2.5	4.2	6.1	-3	-1
16	Yiddinga, BLK 84	46	-8	-7	-0.2	-1	-3.5	-3.8	1	0
17	Yulong Poll, 060624	47	6	7	0.1	-2.1	-3.7	-3.8	-2	1
	Average performance	**41**	**5.4 kg**	**3.8 kg**	**17.7 um**	**21.6 kg**	**42.7 kg**	**35.9 kg**	**13 %**	**8 %**

* Link ram: Ram evaluated to provide links between site evaluations and sites so that the all site results can be combined into a single report, e.g., *Merino Superior Sires.*

UR Unregistered Flock. Rams bred in an unregistered flock are identified in the table by a UR following the ram's code.

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

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

■ Information on how to use the results in the table above can be found on page 12.

Table 2. **Other measured traits**

Ram code	Breeders flock, Ram number	Number of progeny	Flock Breeding Values (deviations)						
			FDCV %	SL mm	SS N/ktex	CURV deg/mm	FAT mm	EMD mm	WEC %
			A^	*A*^	*A*^	*A*^	*H*^	*H*^	*P*^
1*	Billandri Poll, 070380	50	-1.6	6.9	3.3	-1.3	1.8	1.8	10
2	Centre Plus Poll, 607065	39	1.3	9.2	-0.2	-9.1	0.4	0.7	9
3	Connewarran, 8002	46	-0.7	3.6	7.0	-2.7	0.9	1.1	42
4*	Glenlea Park, 070706	41	-0.9	9.2	1.1	-2.6	0.9	0.5	-38
5	Hannaton, 080002	48	1.2	4.9	-2.4	-4.8	0.1	0.5	56
6	Kerrsville Poll, 060436	33	-0.6	-2.2	1.4	9.3	1.3	0.8	4
7 UR	Kia Ora, 060151	40	0.7	-3.1	-1.7	1.6	-2.4	-1.4	3
8	Kurra-Wirra, BZ5000	30	-0.2	0.2	-0.4	-4.4	-1.3	-1.5	6
9	Lachlan Merinos, 80SP30	40	-0.7	-2.0	0.6	12.8	-0.1	-0.6	-68
10	Mokanger, B23	51	0.1	-9.7	-2.8	5.9	-1.1	-1.1	1
11	Nareeb Nareeb, 80411	43	0.5	-1.6	-0.3	0.7	-0.1	-0.9	3
12*	Pooginook, Ranger	28	-0.4	6.6	5.3	-5.9	-3.2	-2.6	62
13*	Roseville Park, 070949 (Dohne)	33	0.3	-7.2	-5.6	2.8	0.8	1.3	-18
14	The Mountain Dam, 08/NBJ012	27	1.1	-5.1	-1.1	2.0	-1.1	-0.8	-14
15	Uardry, 050068 (Dohne)	51	-0.8	1.6	-1.5	0.0	4.5	3.7	-43
16	Yiddinga, BLK 84	46	0.1	-10.4	-0.4	1.7	-1.6	-1.1	22
17	Yulong Poll, 060624	47	0.7	4.3	-2.2	-11.9	0	-0.2	52
	Average performance	**41**	**17.8 %**	**88.2 mm**	**24.9 N/ktex**	**98.2 deg/mm**	**1.2 mm**	**16.8 mm**	

* Link ram: Ram evaluated to provide links between site evaluations and sites so that the all site results can be combined into a single report, e.g., *Merino Superior Sires.*

UR Unregistered Flock. Rams bred in an unregistered flock are identified in the table by a UR following the ram's code.

^ P = Post Weaning (210 to 300 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%.

■ Information on how to use the results in the table above can be found on page 12.

Understanding the results

Scored trait performance – Tables 3a, 3b, 3c and 3d – pages 16 to 19

The following description of trait scores is a summary of the detailed word and diagrammatical description of these scores in the Visual Sheep Scores booklet (free on application to AWI 02 92995155).

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

■ Fleece rot:	The severity of fleece rot from **1** (no fleece rot), **2 and 3** (bands of bacterial staining but no crusting), and **4 and 5** (bands of crusty fleece rot).
■ Wool colour:	Greasy wool colour scored from **1** (whitest) to **5** (yellow).
■ Wool character:	Definition and variation of crimp between and along the staple scored from **1** (well defined and regular) to **5** (undefined and large variation).
■ Dust penetration:	Degree of dust penetration from **1** (only tip <5%) to **5** (80 to 100% of staple).
■ Staple weathering:	The deterioration due to light and water from **1** (least, <5% of staple) to **5** (most, 30 to 50%) reflect the depth and degree of deterioration.
■ Staple structure:	The size and diameter of each staple from **1** (<5mm) to **5** (30 to 50 mm)
■ Face cover:	Wool cover on the face scored from **1** (open face) to **5** (fully covered face).
■ Feet/Legs:	Conformation of feet and legs scored from **1** (very good) to **5** (very poor).
■ Body wrinkle:	The degree of body wrinkle from **1** (no wrinkle) to **5** (extensive wrinkle).
■ Jaw:	Under- or over-shot lower jaw (and teeth) relative to the top jaw. Three scores **1** (very well aligned), **3** (marginally under or over) and **5** (heavily under or over).
■ Back/Shoulder:	Conformation of the back and shoulder from **1** (very good) to **5** (very poor).
■ Fibre pigmentation:	The percentage of dark fibres on any part of the sheep from **1** (0 pigmented fibres at any site) to **5** (76 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** (76 to 100% pigmented area on one or more bare skin sites, **and/or** 76 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.
■ 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 kind legs from **1** (nil) to **5** (extensive).
■ Dag	Degree of dag adhering to the breech and legs from **1** (nil) to **5** (extensive).

Table 3a. **Visual trait assessments – Wool quality**

Visually assessed traits reported in Tables 3a, b, c and d were scored at their final Assessment except for pigmentation that was scored at tagging and ongoing and breech traits recorded at marking time.

Traits are reported as a deviation (Dev) from the average trait score for all progeny. The percentage of a ram's progeny assessed for each score is also reported.
For the majority of breeder's objectives a negative deviation would be considered favourable and the larger the deviation the better.

		Wool Quality																						
Ram		**Fleece Rot**						**Wool Colour**						**Wool Character**						**Dust Penetration**					
code	**Breeders flock, Ram number**	**Dev**	**1**	**2**	**3**	**4**	**5**	**Dev**	**1**	**2**	**3**	**4**	**5**	**Dev**	**1**	**2**	**3**	**4**	**5**	**Dev**	**1**	**2**	**3**	**4**	**5**
1*	Billandri Poll, 070380	0.0	96	0	0	4	0	0.2	9	74	15	2	0	0.1	5	30	48	17	0	0.0	0	87	13	0	0
2	Centre Plus Poll, 607065	0.0	91	3	3	3	0	-0.1	21	76	3	0	0	0.2	4	36	30	30	0	0.0	0	85	15	0	0
3	Connewarran, 8002	-0.1	98	2	0	0	0	-0.4	55	40	3	2	0	-0.4	19	45	33	3	0	-0.1	3	90	7	0	0
4*	Glenlea Park, 070706	0.2	74	16	10	0	0	0.2	6	81	10	3	0	0.5	0	13	61	26	0	0.1	0	74	26	0	0
5	Hannaton, 080002	-0.1	95	5	0	0	0	0.0	22	73	2	3	0	0.0	3	38	51	8	0	0.0	0	89	11	0	0
6	Kerrsville Poll, 060436	0.1	87	6	4	3	0	-0.1	25	69	6	0	0	0.1	0	34	56	10	0	0.0	0	84	16	0	0
7 UR	Kia Ora, 060151	0.0	91	3	6	0	0	0.1	18	70	12	0	0	0.1	6	24	64	6	0	-0.1	0	91	9	0	0
8	Kurra-Wirra, BZ5000	0.0	88	12	0	0	0	0.2	12	72	12	4	0	-0.3	8	48	44	0	0	0.2	0	68	32	0	0
9	Lachlan Merinos, 80SP30	-0.1	94	6	0	0	0	0.2	14	71	9	6	0	-0.2	3	54	37	6	0	0.1	0	77	23	0	0
10	Mokanger, B23	0.0	90	3	7	0	0	-0.2	39	54	5	2	0	0.1	3	29	56	12	0	0.0	2	83	15	0	0
11	Nareeb Nareeb, 80411	-0.1	94	3	3	0	0	-0.1	22	78	0	0	0	0.1	0	38	56	6	0	-0.1	0	94	6	0	0
12*	Pooginook, Ranger	-0.1	92	8	0	0	0	-0.1	42	46	8	4	0	-0.3	12	46	38	4	0	0.0	0	83	17	0	0
13*	Roseville Park, 070949 (Dohne)	0.1	83	14	0	3	0	0.3	0	83	14	3	0	0.4	4	24	41	31	0	0.1	0	79	21	0	0
14	The Mountain Dam, 08/NBJ012	0.1	90	5	0	5	0	-0.5	67	33	0	0	0	-0.3	10	57	29	4	0	-0.1	0	90	10	0	0
15	Uardry, 050068 (Dohne)	0.0	91	4	3	2	0	0.1	9	80	11	0	0	0.1	3	31	53	13	0	0.0	0	82	18	0	0
16	Yiddinga, BLK 84	-0.1	92	8	0	0	0	-0.2	32	65	3	0	0	-0.1	0	57	38	5	0	0.0	3	86	8	3	0
17	Yulong Poll, 060624	0.1	91	3	0	6	0	0.2	11	71	14	4	0	-0.1	9	34	51	6	0	-0.1	3	86	11	0	0
	Average performance	**1.1**	**90**	**6**	**2**	**2**	**0**	**1.9**	**24**	**67**	**7**	**2**	**0**	**2.6**	**5**	**38**	**46**	**11**	**0**	**2.1**	**1**	**84**	**15**	**0**	**0**

* Link ram: Ram 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.*

UR Unregistered Flock. Rams bred in an unregistered flock are identified in the table by a UR following the ram's code.

■ Information on how to use the results in the table above can be found on page 15.

Table 3b. **Visual trait assessments – Wool quality and Pigmentation**

Traits are reported as a deviation (Dev) from the average trait score for all progeny. The percentage of a ram's progeny assessed for each score is also reported.
For the majority of breeder's objectives a negative deviation would be considered favorable and the larger the deviation the better.

Four pigmentation traits are reported as described on page 16. These are Fibre pigmentation, Non-fibre pigmentation, Recessive "black" and Random "spot".
Fibre pigmentation and Non-fibre pigmentation are scored **1** to **5** however Recessive black and Random spot are scored **1** (no pigmentation of this type) or **5** (when the trait is expressed). Only the percentage scored 5 are reported for Recessive black and Random spot.

		Wool Quality												**Pigmentation**											
Ram		**Staple Weathering**						**Staple Structure**						**Fibre pigmentation**						**Non-fibre pigmentation**						**Black**	**Spot**
code	**Breeders flock, Ram number**	**Dev**	**1**	**2**	**3**	**4**	**5**	**Dev**	**1**	**2**	**3**	**4**	**5**	**Dev**	**1**	**2**	**3**	**4**	**5**	**Dev**	**1**	**2**	**3**	**4**	**5**	**5**	**5**
1*	Billandri Poll, 070380	0.0	0	70	30	0	0	0.0	0	24	70	6	0	-0.1	100	0	0	0	0	0.4	0	42	50	4	4	0	0
2	Centre Plus Poll, 607065	0.2	0	42	58	0	0	0.0	0	18	82	0	0	0.1	92	5	0	3	0	0.0	10	49	41	0	0	0	0
3	Connewarran, 8002	0.0	0	71	29	0	0	-0.1	0	31	69	0	0	0.0	98	0	2	0	0	0.3	11	26	59	4	0	0	0
4*	Glenlea Park, 070706	0.2	0	45	55	0	0	0.0	0	19	81	0	0	0.0	95	0	5	0	0	0.2	5	49	41	5	0	0	2
5	Hannaton, 080002	0.0	0	68	32	0	0	0.0	0	19	81	0	0	0.0	96	2	0	0	2	-0.1	19	46	35	0	0	0	0
6	Kerrsville Poll, 060436	-0.2	0	84	16	0	0	0.0	0	19	81	0	0	-0.1	100	0	0	0	0	-0.1	16	45	39	0	0	0	0
7 UR	Kia Ora, 060151	-0.1	0	76	24	0	0	0.1	0	12	88	0	0	0.0	95	0	5	0	0	0.3	5	30	62	3	0	0	2
8	Kurra-Wirra, BZ5000	-0.1	0	72	28	0	0	0.0	0	20	80	0	0	0.1	87	10	3	0	0	-0.2	14	63	23	0	0	0	0
9	Lachlan Merinos, 80SP30	0.1	0	54	46	0	0	0.0	0	23	77	0	0	0.1	95	0	3	0	2	0.1	12	40	45	3	0	0	2
10	Mokanger, B23	-0.1	0	76	24	0	0	-0.1	0	34	66	0	0	0.0	98	0	2	0	0	-0.3	14	71	14	1	0	0	0
11	Nareeb Nareeb, 80411	0.0	0	66	34	0	0	-0.1	0	31	69	0	0	0.0	98	0	0	2	0	-0.1	16	47	37	0	0	0	0
12*	Pooginook, Ranger	0.1	0	54	46	0	0	0.0	0	21	79	0	0	-0.1	100	0	0	0	0	-0.4	21	68	11	0	0	0	0
13*	Roseville Park, 070949 (Dohne)	0.1	0	55	45	0	0	0.0	0	17	83	0	0	0.0	97	0	0	3	0	-0.1	25	36	39	0	0	0	3
14	The Mountain Dam, 08/NBJ012	-0.2	0	86	14	0	0	-0.1	0	33	67	0	0	-0.1	100	0	0	0	0	-0.3	18	63	19	0	0	0	0
15	Uardry, 050068 (Dohne)	0.0	0	62	38	0	0	0.0	0	20	78	2	0	0.0	98	2	0	0	0	-0.1	10	65	25	0	0	0	2
16	Yiddinga, BLK 84	-0.2	0	86	14	0	0	0.1	0	16	84	0	0	0.0	98	0	2	0	0	0.0	13	39	48	0	0	0	4
17	Yulong Poll, 060624	0.0	0	71	29	0	0	0.0	0	23	77	0	0	-0.1	100	0	0	0	0	0.4	2	28	66	4	0	0	0
	Average performance	**2.3**	**0**	**67**	**33**	**0**	**0**	**2.8**	**0**	**22**	**77**	**1**	**0**	**1.1**	**97**	**2**	**1**	**0**	**0**	**2.3**	**12**	**47**	**39**	**2**	**0**	**0**	

* Link ram: Ram 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.*

UR Unregistered Flock. Rams bred in an unregistered flock are identified in the table by a UR following the ram's code.

■ Information on how to use the results in the table above can be found on page 15.

Table 3c. **Visual trait assessments – Conformation**

Traits are reported as a deviation (Dev) from the average trait score for all progeny. The percentage of a ram's progeny assessed for each score is also reported.
For the majority of breeder's objectives a negative deviation would be considered favorable and the larger the deviation the better. Face cover and body wrinkle are possible exceptions when for many breeders the optimum score is in the middle of the range therefore trait leaders have not been highlighted.

		Conformation																											
Ram		**Jaw**						**Legs and Feet**						**Shoulder and Back**						**Face Cover**						**Body Wrinkle**					
code	**Breeders flock, Ram number**	**Dev**	**1**	**2**	**3**	**4**	**5**	**Dev**	**1**	**2**	**3**	**4**	**5**	**Dev**	**1**	**2**	**3**	**4**	**5**	**Dev**	**1**	**2**	**3**	**4**	**5**	**Dev**	**1**	**2**	**3**	**4**	**5**
1*	Billandri Poll, 070380	0.0	100	0	0	0	0	0.0	4	37	48	7	4	0.0	0	85	15	0	0	-0.2	3	15	80	2	0	0.0	0	98	2	0	0
2	Centre Plus Poll, 607065	0.0	97	3	0	0	0	0.1	12	18	55	9	6	0.1	0	73	24	3	0	-0.2	0	21	70	9	0	0.0	0	94	6	0	0
3	Connewarran, 8002	0.0	100	0	0	0	0	0.1	3	26	62	7	2	0.0	0	81	19	0	0	0.1	0	5	81	12	2	0.0	0	95	3	2	0
4*	Glenlea Park, 070706	0.0	97	3	0	0	0	-0.4	17	35	48	0	0	0.0	0	81	19	0	0	0.0	0	3	94	3	0	0.0	0	100	0	0	0
5	Hannaton, 080002	0.1	97	0	0	0	3	-0.1	8	35	46	8	3	-0.1	0	97	0	3	0	-0.1	0	14	81	5	0	0.0	0	97	3	0	0
6	Kerrsville Poll, 060436	0.0	97	0	3	0	0	-0.2	6	47	44	3	0	0.0	0	81	16	3	0	0.1	0	4	84	12	0	0.0	0	97	3	0	0
7 UR	Kia Ora, 060151	0.0	97	0	3	0	0	0.0	0	33	61	6	0	0.0	0	79	21	0	0	0.0	0	0	97	3	0	0.0	0	94	6	0	0
8	Kurra-Wirra, BZ5000	0.0	100	0	0	0	0	0.4	0	16	64	16	4	0.0	0	84	12	4	0	0.2	0	0	80	20	0	0.1	0	92	8	0	0
9	Lachlan Merinos, 80SP30	0.0	100	0	0	0	0	-0.3	14	49	23	14	0	0.0	0	77	23	0	0	0.0	0	6	80	14	0	0.0	0	97	3	0	0
10	Mokanger, B23	0.0	100	0	0	0	0	-0.1	0	39	59	2	0	0.1	0	73	24	3	0	0.3	0	3	68	27	2	0.0	0	93	7	0	0
11	Nareeb Nareeb, 80411	0.0	100	0	0	0	0	0.2	0	31	56	9	4	-0.1	0	88	12	0	0	0.2	0	0	75	25	0	0.0	0	97	3	0	0
12*	Pooginook, Ranger	0.0	100	0	0	0	0	-0.1	4	38	50	8	0	0.1	0	71	29	0	0	0.0	0	0	92	8	0	0.0	0	100	0	0	0
13*	Roseville Park, 070949 (Dohne)	0.0	100	0	0	0	0	0.1	0	34	52	14	0	0.0	0	83	17	0	0	-0.2	4	17	76	3	0	0.0	0	100	0	0	0
14	The Mountain Dam, 08/NBJ012	0.0	100	0	0	0	0	0.0	5	38	38	19	0	0.0	0	86	14	0	0	0.0	0	9	81	10	0	0.0	0	100	0	0	0
15	Uardry, 050068 (Dohne)	0.0	100	0	0	0	0	0.0	7	31	49	13	0	0.0	0	84	16	0	0	0.0	0	7	82	9	2	0.0	0	100	0	0	0
16	Yiddinga, BLK 84	0.0	97	0	3	0	0	0.1	3	32	51	14	0	-0.1	0	92	8	0	0	-0.1	0	5	92	3	0	0.0	2	95	3	0	0
17	Yulong Poll, 060624	0.0	100	0	0	0	0	0.1	3	34	46	17	0	0.0	0	80	20	0	0	0.0	0	3	94	3	0	0.0	0	100	0	0	0
	Average performance	**1.0**	**99**	**0**	**1**	**0**	**0**	**2.7**	**5**	**34**	**50**	**10**	**1**	**2.2**	**0**	**82**	**17**	**1**	**0**	**3.0**	**0**	**7**	**83**	**10**	**0**	**2.0**	**0**	**97**	**3**	**0**	**0**

* Link ram: Ram 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.*

UR Unregistered Flock. Rams bred in an unregistered flock are identified in the table by a UR following the ram's code.

■ Information on how to use the results in the table above can be found on page 15.

Table 3d. **Visual trait assessments – Breech**

Traits are reported as a deviation (Dev) from the average trait score for all progeny. The percentage of a ram's progeny assessed for each score is also reported. For the majority of breeder's objectives a negative deviation would be considered favorable and the larger the deviation the better.

		Breech																					
Ram		**Breech Cover**						**Crutch Cover**						**Breech Wrinkle**						**Dag**					
Code	**Breeders flock, Ram number**	**Dev**	**1**	**2**	**3**	**4**	**5**	**Dev**	**1**	**2**	**3**	**4**	**5**	**Dev**	**1**	**2**	**3**	**4**	**5**	**Dev**	**1**	**2**	**3**	**4**	**5**
1*	Billandri Poll, 070380	-0.2	0	5	32	40	23							-0.8	49	34	17	0	0	-0.3	82	11	7	0	0
2	Centre Plus Poll, 607065	-0.3	4	0	39	39	18							0.1	18	37	26	6	13	-0.3	76	15	9	0	0
3	Connewarran, 8002	0.4	0	0	7	43	50	**Crutch Cover was**						0.5	11	20	39	20	10	-0.2	69	26	2	0	3
4*	Glenlea Park, 070706	-0.1	0	0	31	50	19	**not scored**						-0.9	58	33	9	0	0	-0.1	55	39	3	3	0
5	Hannaton, 080002	-0.1	0	2	34	39	25							-0.4	34	30	30	6	0	0.0	53	33	14	0	0
6	Kerrsville Poll, 060436	0.4	0	0	12	36	52							0.0	24	21	36	19	0	0.2	52	24	17	7	0
7 UR	Kia Ora, 060151	-0.5	6	5	43	30	16							0.2	22	22	32	19	5	-0.2	66	28	6	0	0
8	Kurra-Wirra, BZ5000	-0.3	0	0	39	46	15							0.4	11	25	43	14	7	0.3	44	32	12	12	0
9	Lachlan Merinos, 80SP30	0.0	0	3	33	28	36							-0.3	33	36	18	10	3	-0.1	61	36	0	0	3
10	Mokanger, B23	0.0	0	1	33	33	33							0.5	8	20	49	16	7	0.3	45	36	12	2	5
11	Nareeb Nareeb, 80411	0.1	0	2	22	39	37							0.2	20	29	27	20	4	-0.1	67	21	6	3	3
12*	Pooginook, Ranger	0.1	0	0	32	29	39							0.3	14	29	39	0	18	0.2	43	39	13	0	5
13*	Roseville Park, 070949 (Dohne)	0.1	0	0	30	28	42							-0.8	52	36	12	0	0	-0.5	86	14	0	0	0
14	The Mountain Dam, 08/NBJ012	0.0	0	0	28	44	28							1.0	4	20	32	16	28	0.4	29	48	19	4	0
15	Uardry, 050068 (Dohne)	0.1	0	7	24	24	45							-0.9	65	20	10	3	2	-0.2	68	27	3	0	2
16	Yiddinga, BLK 84	0.3	0	0	28	19	53							0.3	14	35	26	16	9	0.3	53	21	11	11	4
17	Yulong Poll, 060624	0.1	0	4	23	30	43							0.6	5	20	50	11	14	0.1	65	18	6	9	2
	Average performance	**4.0**	**0**	**2**	**29**	**35**	**34**							**2.4**	**26**	**28**	**29**	**10**	**7**	**1.6**	**59**	**28**	**8**	**3**	**2**

* Link ram: Ram 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.*

UR Unregistered Flock. Rams bred in an unregistered flock are identified in the table by a UR following the ram's code.

■ Information on how to use the results in the table above can be found on page 15.

Table 4. **Ram averages for measured traits**

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

Ram code	Breeders flock, Ram number	No of Progeny	Ram averages for measured traits (deviations)									
			GFW %	CFW %	FD um	WT kg			FDCV %	Curv *deg/mm*	SL *mm*	SS *N/ktex*
			A^	*A*^	*A*^	*W*^	*Y*^	*H*^	*A*^	*A*^	*A*^	*A*^
1*	Billandri Poll, 070380	50	-0.3	-0.2	0.1	-0.6	0.4	-1.2	-1.2	-1.1	4.7	2.1
2	Centre Plus Poll, 607065	39	0.4	0.3	-0.6	0.8	1.9	1.8	1.2	-5.5	7.1	2.4
3	Connewarran, 8002	46	0.5	0.4	0.2	-0.3	0.9	-0.5	-0.7	-1.1	1.6	6.4
4*	Glenlea Park, 070706	41	-0.3	-0.3	0.3	-0.6	1.1	0.1	-0.5	-1.9	7.3	1.3
5	Hannaton, 080002	48	0.3	0.3	0.3	-1.3	0.6	1.0	0.7	-2.7	2.7	-1.9
6	Kerrsville Poll, 060436	33	0.0	0.0	-0.3	0.8	0.5	0.0	-0.4	7.6	-1.1	1.2
7 UR	Kia Ora, 060151	40	0.0	0.0	-0.1	-0.1	-1.6	-2.6	0.5	2.1	-2.3	-1.9
8	Kurra-Wirra, BZ5000	30	0.0	0.0	0.6	-0.3	-0.7	-1.2	-0.3	-3.1	-0.7	-1.7
9	Lachlan Merinos, 80SP30	40	0.0	0.0	-0.2	3.0	2.7	3.8	-0.3	10.4	-0.6	0.6
10	Mokanger, B23	51	-0.4	-0.4	-0.6	-2.6	-2.7	-3.4	-0.1	3.2	-7.0	-2.9
11	Nareeb Nareeb, 80411	43	0.5	0.2	0.2	0.2	-1.2	0.1	0.3	1.3	-1.3	0.0
12*	Pooginook, Ranger	28	0.4	0.3	-0.1	1.4	0.5	-0.3	-0.3	-3.0	5.3	6.0
13*	Roseville Park, 070949 (Dohne)	33	-0.5	-0.5	0.7	1.1	1.9	3.0	0.4	0.7	-6.3	-6.6
14	The Mountain Dam, 08/NBJ012	27	0.2	0.3	-0.4	-0.7	0.4	-0.5	1.1	3.4	-3.6	-0.3
15	Uardry, 050068 (Dohne)	51	-0.4	-0.4	0.1	1.4	1.1	4.1	-0.5	-1.6	0.4	-1.7
16	Yiddinga, BLK 84	46	-0.5	-0.1	0.0	-0.6	-3.0	-2.1	-0.1	0.2	-8.3	-1.2
17	Yulong Poll, 060624	47	0.1	0.2	0.0	-1.7	-2.6	-2.1	0.4	-8.7	2.0	-1.7
	Average performance	**41**	**5.4 kg**	**3.8 kg**	**17.7 um**	**21.6**	**42.7 kg**	**35.9**	**17.8 %**	**98.2 deg/mm**	**88.2 mm**	**24.9 N/ktex**

* Link ram: Ram 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.*

UR Unregistered Flock. Rams bred in an unregistered flock are identified in the table by a UR following the ram's code.

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

Understanding the results

Index Options – indexes reported on page 10.

Breeding Objective index options provide the relative value of rams 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 ram 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 ram is used in a breeder's flock.

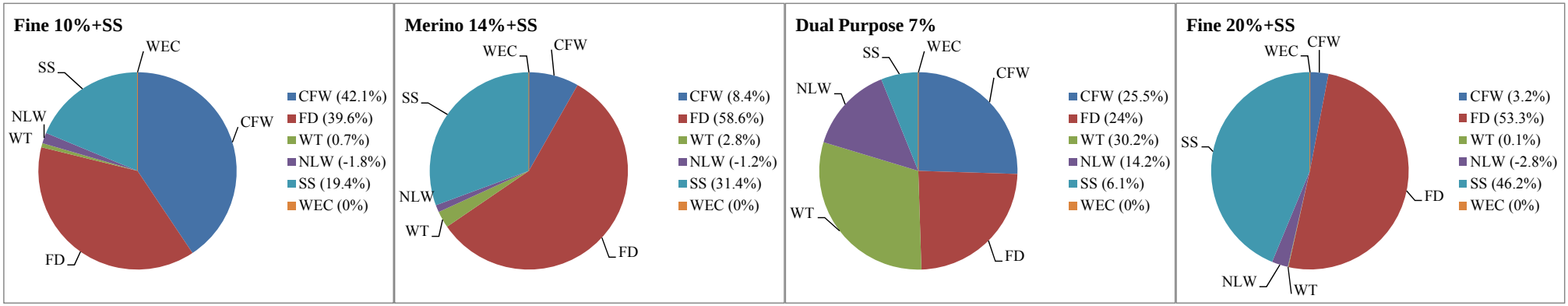
All AMSEA site evaluation reports present 3 standard indexes to provide combined **measured** trait performance These 3 AMSEA indexes are Fine 10%+SS; Merino 14%+SS; and Dual Purpose 7%. These indexes are the same as MERINOSELECT indexes of that name however as there is no direct reproduction records captured by sire evaluation AMSEA do not include a Reproduction (NLW) FBV in their index calculations. As a result the 14% contribution by NLW in the Dual Purpose 7% index is not effectively applied by the index calculation.

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

Index *production system* and breeding objectives

AMSEA **Fine 10%+SS** (F10% +SS)	*Fine wool Merino self-replacing production system* with moderate emphasis on fleece weight and fibre diameter (10% Micron Premium) plus moderate emphasis on staple strength and maintain performance on other traits.
AMSEA **Merino 14%+SS** (M14% +SS)	*Medium wool Merino self-replacing production system* with high emphasis on fibre diameter and low emphasis on fleece weight (14% Micron Premium) plus moderate emphasis on live weight and staple strength with maintain performance on other traits.
AMSEA **Dual Purpose 7%** (DP7%)	*Medium wool Merino self-replacing production system* (in conjunction with 25% of ewes in terminal lamb production) with moderate emphasis on fleece weight and fibre diameter (7% Micron Premium) plus high emphasis on live weight and maintain performance on other traits.
AMSEA **Fine 20%+SS** (M20% +SS)	*Fine wool Merino self-replacing production* system with high emphasis on fibre diameter (20% micron premium) 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 rams using the index.



Accuracy of Flock Breeding Values

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

True Breeding Values would be achieved if the number of progeny evaluated for each ram 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 rams 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 ram's progeny.

Link rams

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

To be used as a link a ram 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 rams which can provide a wider perspective of the elite rams available across many flocks in Australia and New Zealand.

Combined measured trait and combined visual trait performance

Combined measured trait performance is calculated as (AMSEA Merino 7% index – 100). The AMSEA Merino 7% index places equal and high emphasis on both fleece weight and fibre diameter, moderate emphasis on body weight and adequate emphasis on other measured traits to allow them to be maintained. Due to the general nature of this index it is useful to be used to report the graphical summary of all traits. Breeders with significantly different objectives should take this into account when considering this graphical summary.

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

Example

Ram's performance:
- AMSEA 7% MP Index value = 119.7
- Tops% = 25.5 (average Tops% = 25.1)
- Culls% = 17.6 (average Culls% = 16.4)

- Combined Measured = 119.7.0 – 100 = 19.7
- Combined Visual = ((25.5 – 17.6)/5) – ((25.1 – 16.4)/5)
  = 7.9/5 – 8.7/5 = 1.58 – 1.74 = -0.16

Elders Victoria Sire Evaluation Group

2010 Drop