

YARDSTICK

Central Test Sire Evaluation

2005 Drop

Conducted by

**The Federation of Performance Sheep Breeders
(WA Branch)**

Stud Merino Breeders Association of WA

under the auspices of

The Australian Merino Sire Evaluation Association



with support from



Wool Agency

August 2007

Disclaimer

The information contained in this publication is based on knowledge and understanding at the time of writing (August 2007). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with an appropriate adviser.

The product trade names in this publication are supplied on the understanding that no preference between equivalent products is intended and that the inclusion of a product name does not imply endorsement by the site over any equivalent product from another manufacturer.

Recognising that some of the information in this document is provided by third parties, the author and the publisher take no responsibility for the accuracy, currency, reliability and correctness of any information included in the document provided by third parties.

YARDSTICK - Central Test Sire Evaluation

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

The Federation of Performance Sheep Breeders (WA branch) runs the YARDSTICK Sire Evaluation site. They are listed in the table below.

- A total of 13 evaluations have been run by YARDSTICK (1993-2005 drop)
- These evaluations have all taken place at Romilly Hills, Dale River WA.
- Thanks must go to Lorraine Hewitt of Australian Fibre testing for assistance with wool testing and to the Dorman Family of Romilly Hills for management of the trial.

Site Committee

Name	Phone	Position on committee
Bill Sandilands	08 9851 4030	Chairperson
Bob Hall	08 9736 1055	Secretary
Roger Bilney	08 9834 1012	Committee member
Brooks Evans.....	08 9833 7528	Committee member
Max Ewen.....	08 9736 1176	Committee member
Johan Greeff	08 9821 3215	Committee member
Russell Meaton	08 9834 1030	Committee member

For further information on this report please contact

Bill Sandilands, phone: 08 9851 4030, billandri@onaustralia.com.au

Bob Hall, phone: 08 9736 1055, e-mail: bobh@hallandco.com.au

Report authors

Bill Sandilands¹, Bronwyn Clarke², Andrew Swan³, Allan Casey⁴

¹ Billandri, Kendenup WA 6323

² PO Box 7076, Shenton Park, WA 6008

³ Animal Genetics and Breeding Unit, UNE, Armidale, NSW 2351

⁴ NSW DPI, Forest Road, Orange 2800

August 2007

2005 Drop Hogget Evaluation –YARDSTICK Sire Evaluation

The information in this site report provides a comprehensive assessment of the YARDTSICK hogget evaluation of the 2005 drop sire's progeny performance, both measured and visually assessed. Additional measurements have been taken to give an average production value.

This report provides the results from the 2005 drop, hogget evaluation, 16 month old progeny and 12 months of wool growth.

Contents

	Page
Sire and owner details	3
Managers report	4
Understanding the graphs and tables of results	6
Results – Hogget Evaluation	
<u>Summary</u> Figure 1: Combined measured and visual assessed performance	11
Table A: MERINOSELECT Indexes and Classer's Grades	12
Figure 2: Fleece Weight and Fibre Diameter	13
Figure 3: Classer's Grade: Tops and Culls	13
<u>Detail</u> Table 1: Major measured trait and Classer's Grade performance	14
Table 2: Other measured trait breeding values	15
Table 3a: Visual trait performance – wool quality	16
Table 3b: Visual trait performance – conformation & pigmentation	17
Table 4: Sire averages for measured traits	18
Production analysis results	
Table 5: Wool quality and fleece value summary	19

2005 Drop Hogget Evaluation

YARDSTICK 2005 drop Hogget Evaluation: Age – 16 months, Wool growth – 12 month

Sire and owner details

Sire code	Sire name Sire ID #	Contact Name, Address Phone and Fax Number
1*	Ag WA Baseflock, 20002058 5090122000002058	Johan Greeff, DAFWA, 10 Dore St Katanning WA 6317 ph 08 9921 3215 fax 08 9821 3333
2	Billandri, 010764 6005712001010764	Bill Sandilands, Billandri Kendenup WA 6323 ph 08 9851 4030 fax 08 9851 4264
3	Coromandel Poll, OAB 420 6005532003030420	Michael Campbell, Coromandel, Gairdner WA 6337 ph 08 9836 6044 fax 08 9836 609
4	Cranmore Park, 1.1 5001532001010001	Bruce Lefroy, Cranmore Park RSM 427 Moora WA 6510 ph 08 9654 9066 fax 08 9654 9067
5	Glenlea, 030305 5100012003030305	Alex Leach, PO Box 70 Katanning WA 6317 ph 08 9821 1597 fax 08 9821 1004
6	Merinotech WA Poll, 011218 6090402001011218	Ian Robertson, Merinotech (WA) Ltd, RMB 311 Kojonup WA 6395 ph 08 9833 6251 fax 08 9833 6255
7	Merinotech WA Poll, 011573 6090402001011573	Ian Robertson, Merinotech (WA) Ltd, RMB 311 Kojonup WA 6395 ph 08 9833 6251 fax 08 9833 6255
8	Monte Verde, 3.44 5041632003030044	SJ & SL Hall, Monte Verde Tenterden WA 6322 ph 08 9852 4045 fax 08 9852 4045
9	Mulureen Merinos Poll, M2363 6091500000002363	Kath Stacey, PO Box 63 Shackleton WA 6386 ph 08 90641165 fax 08 9064 1175
10	Mulureen Merinos Poll, X728-03 6091502003000728	Kath Stacey, PO Box 63 Shackleton WA 6386 ph 08 90641165 fax 08 9064 1175
11	Neerigen, 00.0054 5047572000000054	Roger Bilney, PO Box 88 Kojonup WA 6395 ph 08 9834 1012 fax 08 9834 1036
12*	Nerstane, 990043 5032981999990043	John McLaren, Nerstane Woolbrook NSW 2354 ph 02 6777 5881 fax 2 6777 5922
13	The Grange, 303251 5042082003303251	Lukis Blake, Egerton 12571 West Swan Rd Belhus WA 6069 ph: 08 9296 1880 fax: 08 9296 1088
14	Wallinar, 500G-02 500219200202G500	Jerome & Emily Hardie, Po Box 29 Broomehill WA 6318 ph 08 9824 1239 fax 08 9824 1339
15	Woolkabin, 1.155 5026652001010155	Chris & Eric Patterson, PO Box 657 Katanning WA 6317 ph 08 9822 8050 fax 08 9822 8053

* Sires evaluated to provide links between other Central Test Sire Evaluation sites.

^ ^{UR} – 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).
 - 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.

1. Location

- Dale River, Brookton Highway, Shire of Beverley
- 100km South East of Perth, 50km West of Brookton.Dale River

2. Test Site Managers

- Dorman Family
- RMB 235, Beverley WA 6304

3. Selection and joining

- Ewes used were similar to the previous years – AMS performed based flock from Koorda. Ewe average fibre diameter between 20 and 21 microns.

4. Seasonal conditions

- Rainfall: 33 days of rain recorded during the growing season, mostly in August. April and June were very dry months. The growing season was cut short.
- Supplementary feeding: the lambs were weaned onto a pasture paddock, then barley stubble in January. Hand feeding with barley commences on the 10th of February at a rate of 3 kg per head per week. This was increased to 4 kg in early March and then 5 kg plus hay in April. This was maintained until the end of June when they went onto pasture by mid July.

Managers Report and Visual Assessment

Evaluation and Management Program

Event	Date/s	Age (months)	Wool (months)
Selection of ewes	15/12/04		
Joining	5-7/01/05		
Lambing: start - finish	30/5 – 8/6/05		
Tagging	14/6/05		
Pigment	6/07/05		
Weaning	01/10/05	4	
Weaning body weight			
Even-up shearing	1/10/05	4	
Crutching	04/2005	10	
Fleece sampling	22/08/06	15	11
Staple length	22/08/06	15	11
Assessment shearing	26/09/06	16	12
Classer's Group	28/08/06	15	11
Visual trait scoring	28/08/06	15	11
Body weigh	22/08/06	15	11
Muscle - fat scanning	27/09/06	16	0
WEC sampling	22/08/06	15	11
Drench	10/2005, 04/2006	4, 10	
Wrinkle Score	27/09/06	16	0
Supplementary feeding: start - finish			

Visual tait assessment

Hogget Evaluation Classers:

Preston Clarke, Landmark

Rick Power, Landmark

Understanding the results

Summary graphs and table - page 11

Summary graph: Visual and measured performance. (Figure 1)	Each sire that has 20 or more progeny evaluated is located on the graph. The graph describes performance for combined measured traits and visual assessment. Measured traits are combined with a Merino 7% MERINOSELECT index. Visual trait performance is a combination of Classer's Grade performance (Tops and Culls) - see page 11. Sires that are above average performers for these traits are located toward the top right hand quarter.
Summary table: Indexes and Tops and Culls. (Table A)	Each sire is listed for four index performance options and Classer's Grade (Tops and Culls). The index options are based on measured traits and they vary the emphasis on fleece weight, fibre diameter, body weight, staple strength and reproduction (see 'MERINOSELECT Index Options' - page 8 for a more detailed description of indexes used).
Fleece weight by fibre diameter. (Figure 2)	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 <u>top left hand quarter</u> .
Classers Tops by Cull Grade. (Figure 3)	The graph describes performance for Classer's Tops Grade on the side axis and Cull Grade on the bottom axis. Sires that have above average Tops and below average Culls are in the <u>top left hand quarter</u> .

Tables – page 14

Sire code:	Allows a sire to be located on the summary graphs and some tables.
Sire name:	Identity of the breeder's flock and the sire's number or name.
No. 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 from a SGA contemporary group site analysis. FBVs describe the relative breeding value (genetic performance) of the sires. A sire's progeny will express half of their Sires FBV. FBVs do not necessarily reflect the animals observed performance, which is a combination of both genetic and environmental influences. FBVs are an estimate of the genetic component of the observed performance.
Traits:	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)
Age at assessment:	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).
Sire averages:	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.

Understanding the results – continued

- Classer's Grade:** A classer grades all progeny as either Tops, Flocks or Culls based on their visual assessment of all traits. The percentage deviation from the average of Tops and Culls is presented.
- Scored Traits:** The average score for each trait and percentage of progeny given each score.
- Wool colour: Greasy wool colour scored from 1 (whitest) to 5 (yellow).
 - Wool character: Crimp definition scored from 1 (very well defined) to 5 (undefined).
 - Staple weathering: The deterioration of the staple due to dust, light and/or water (not including fleece rot). Scores from 1 (least) to 5 (most) reflect the depth and degree of deterioration across the fleece. A 1 score is equivalent to a coated fleece in a shed environment and a 5 score is full length and high degree of weathering.
 - Fleece rot: The severity of fleece rot in a progeny group, based on a 0 to 5 score. A score of zero is given to progeny with no fleece rot, while scores of 1 and 2 are given to bands of minor fleece rot (bacterial staining but no crusting), with 3, 4 and 5 being given to bands of crusty fleece rot. For more information on scoring sheep for fleece rot, see NSW DPI, Agfact A3.3.41.
 - Face cover: Wool cover on the face scored from 1 (bare head) to 5 (fully covered face).
 - Feet/Legs: Conformation of feet and legs scored from 1 (sound) to 5 (most deformed).
 - Body/Neck wrinkle: The degree of wrinkling on the neck and body scored from 1 (no wrinkle) to 5 (very heavy wrinkle).
 - Jaw: Under- or over-shot jaw. The percentage of progeny with a significant negative expression is reported as Neg(ative).
 - Back/Shoulder: Conformation of the back and shoulder. The percentage of progeny with a significant negative expression is reported as Neg(ative).
 - Pigmentation: The percentage of progeny in each of the following categories of pigmentation is reported as Neg(ative) if recorded as a 5 score:
 - Black Lamb: recessive coloured sheep (largely pigmented wool or if extensively white, is pigmented around the eyes with more or less symmetrical pigmentation on the rest of the body). If the Black Lamb form of pigmentation is identified it is recorded as a score 5. Other expressions are recorded as score 1.
 - Pigmented wool: pigmentation as random spots or isolated pigmented fibre or pigmented birth-coat halo-hair or pigmented leg hair or Black Lamb. If the quantity of 'pigmented wool' is at a level that would result in a breeding ewe being culled in a high standard commercial Merino flock it is recorded as score 5. Other levels of pigmented wool are recorded as score 1.
 - Pigmented skin: a significant degree of pigmented skin on the sheep's non-wool producing areas not including those defined by pigmented wool. If the degree of 'pigmented skin' is at a level that would result in a breeding ewe being culled in a high standard commercial Merino flock it is recorded as a score 5. Other levels of pigmented skin are recorded as score 1.

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.

The following MERINOSELECT standard indexes – Fine 10% +SS; Merino 14% +SS and Dual Purpose 7% - are AMSEA the base reporting indexes for sites to provide combined measured trait performance. Sites may report additional MERINOSELECT index as they wish. This report has added the following indexes – Fine 10% + SS + WEC.

Index production system and Breeding Objectives

<i>Fine 10% +SS</i> (F10% +SS)	<i>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.</i>
<i>Merino 14% +SS</i> (M14% +SS)	<i>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.</i>
<i>Dual Purpose 7%</i> (DP7%)	<i>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 reproduction and maintain performance on other traits.</i>
<i>Fine 10% + SS + WEC</i>	Similar to F10 + SS but with a high gain in WEC

Index percentage contribution to economic gain

The percentage contribution to economic gain to a commercial merino flock that joins rams selected using an index shown below.

<u>Fine 10% +SS</u>		<u>Merino 14% +SS</u>	
Clean fleece weight:	42%	Clean fleece weight:	8%
Fibre diameter:	39%	Fibre diameter:	59%
Body weight:	1%	Body weight:	3%
Staple strength	19%	Staple strength	31%
Worm egg count	0%	Worm egg count	0%
Number lambs weaned	0%	Number lambs weaned	0%
<u>Dual Purpose 7%</u>		<u>Fine 10% +SS +WEC</u>	
Clean fleece weight:	26%	Clean fleece weight:	32%
Fibre diameter:	24%	Fibre diameter:	28%
Body weight:	30%	Body weight:	1%
Staple strength	6%	Staple strength	17%
Worm egg count	0%	Worm egg count	21%
Number lambs weaned	14%	Number lambs weaned	1%

Wool Quality and Fleece Value

Fleece Value (\$/fleece) – The combination of measured staple length and strength is used to value each fleece, according to its fibre diameter. Estimates of clean price (c/kg) were provided by an industry fleece valuer using sire progeny group averages for fibre diameter, staple strength, staple length, and yield. The prices were estimated for a progeny group. This average price was then multiplied by the average clean fleece weight of the progeny group to arrive at the \$/fleece (fleece value). Table 5 shows the average fleece values for each progeny group. The estimated price given was based on the current Western Australian wool prices in October 2006.

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 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 was 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 CTSE sites located across Australia to allow all sires entered in these sites to have their performance reported relative to each other in *Merino Superior Sires*. *Merino Superior Sires* reports sires from across all effectively linked CTSE sites and across all years at these sites. Link sires are therefore a vital component of the Central Test Sire Evaluation. To be used as link sire a ram must have at least 25 progeny assessed at 1st Evaluation 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 rams available across many flocks in Australia and New Zealand.

Calculation of combined measured trait and combined visual trait performance

Combined measured trait performance is calculated as (MERINOSELECT 7% MP Index - 100). 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:
- 7% MP Index value = 119.7
 - Tops% = 25.5 (average Tops% = 25.1)
 - Culls% = 17.6 (average Culls% = 16.4)
-
- Combined Measured = 119.7 - 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

Summary Graph – Figure 1 - Combined measured traits and visual trait performance

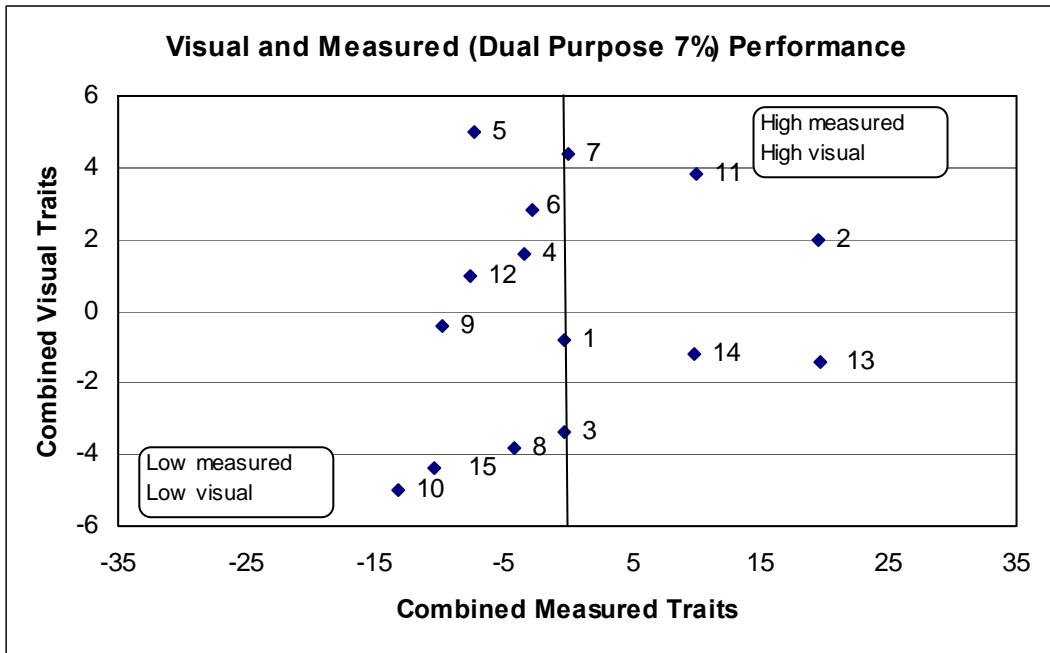
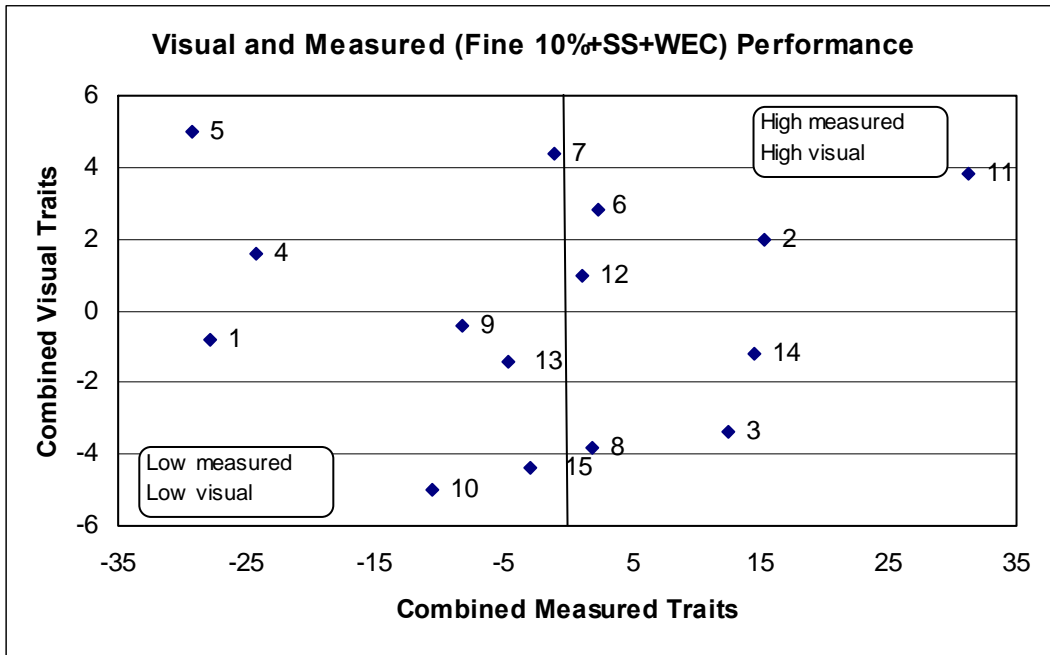


Table A – MERINOSELECT indexes and Classer's Grade

Sire Code	Sire name	MERINOSELECT indexes				Classer's Grade	
		<i>Fine</i>	<i>Merino</i>	<i>Dual</i>	<i>Fine</i>	Tops %	Culls %
		10% +SS	14% +SS	<i>Purpose</i> 7%	10% +SS +WEC	(dev) H [^]	(dev) H
1*	Ag WA Baseflock, 20002058	97.8	96.3	99.7	72.2	-3	1
2	Billandri, 010764	120.3	111.8	119.6	115.3	10	0
3	Coromandel Poll, OAB 420	106.2	104.4	99.7	112.5	-7	10
4	Cranmore Park, 1.1	95.4	98.9	96.6	75.8	5	-3
5	Glenlea, 030305	63.8	70.2	92.8	70.8	12	-13
6	Merinotech WA Poll, 011218	98.1	105.4	97.2	102.4	6	-8
7	Merinotech WA Poll, 011573	89.2	89.8	100.1	99	9	-13
8	Monte Verde, 3.44	108	102	95.8	102	-10	9
9	Mulureen Merinos Poll, M2363	89.2	97.3	90.2	91.8	-5	-3
10	Mulureen Merinos Poll, X728-03	84.2	88.8	86.8	89.5	-13	12
11	Neerigen, 00.0054	124.7	124.3	110	131.2	9	-10
12*	Nerstane, 990043	95.1	94.5	92.4	101.1	3	-2
13	The Grange, 303251	130.4	116	119.7	95.4	-3	4
14	Wallinar, 500G-02	112.6	110.1	109.9	114.6	0	6
15	Woolkabin, 1.155	84.9	90.3	89.7	97.1	-13	9
Average performance						26	19

* Link Sires: Sires evaluated by the site to provide links between years and sites so that the all site results can be combined into a single report – *Merino Superior Sires*

[^] Y = Yearling (300 to 400 days); H = Hogget (400 to 540 days); A = Adult (540 days and older)

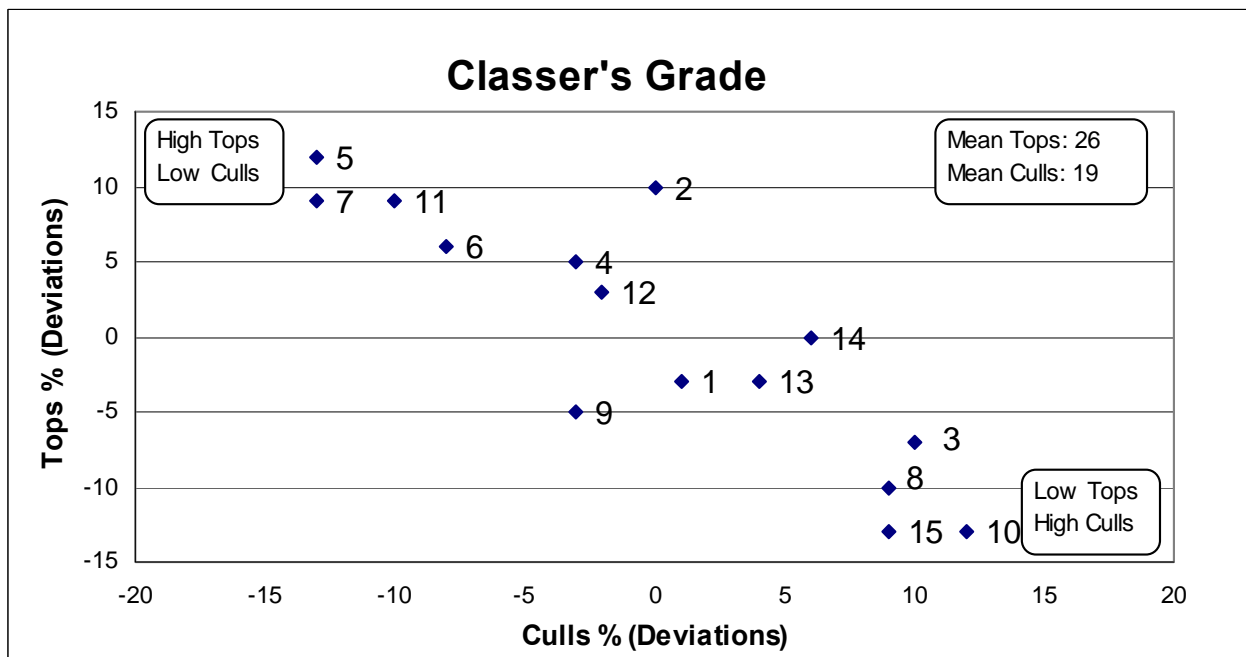
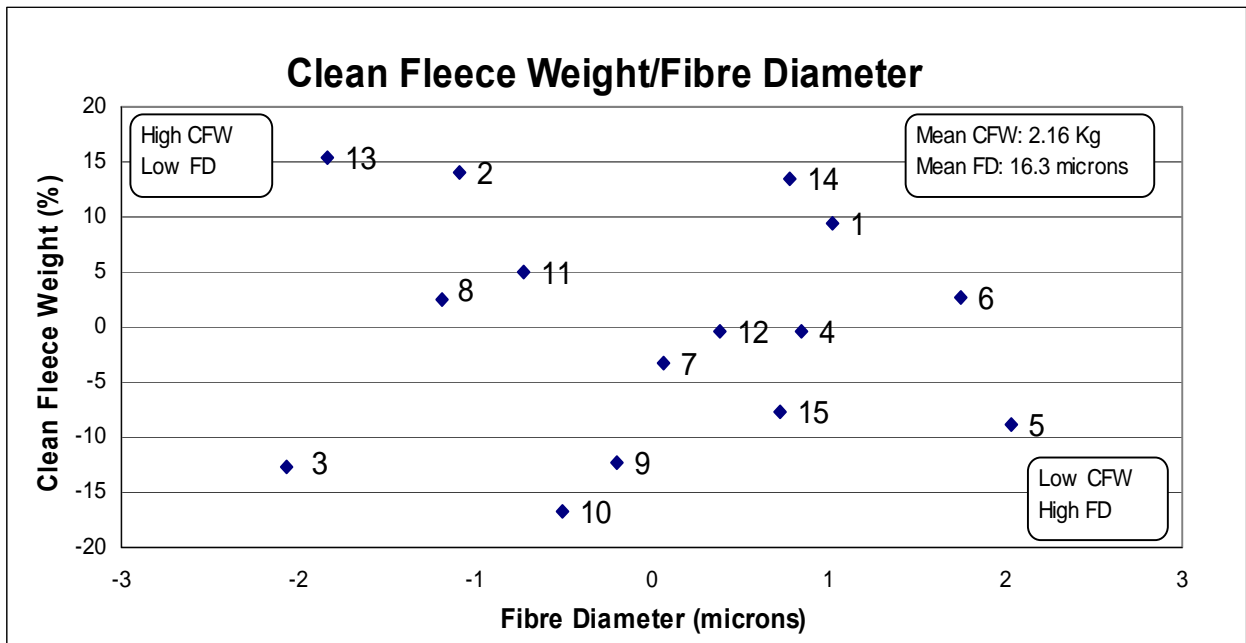


Table 1 – Major measured traits and Classer's Grades

Sire Code	Sire name	Number of progeny	Flock Breeding Values (deviations)				Classer's Grade ¹	
			H^GFW %	HCFW %	HFD μ m	HWT kg	Tops % (dev) H^	Culls % (dev) H
1*	Ag WA Baseflock, 20002058	33	6.0	9.4	1.0	-0.3	-3	1
2	Billandri, 010764	32	13.6	14.1	-1.1	2.1	10	0
3	Coromandel Poll, OAB 420	46	-9.0	-12.6	-2.1	-1.8	-7	10
4	Cranmore Park, 1.1	27	-1.3	-0.5	0.9	0.8	5	-3
5	Glenlea, 030305	34	-9.2	-8.9	2.0	9.0	12	-13
6	Merinotech WA Poll, 011218	28	1.8	2.7	1.8	0.4	6	-8
7	Merinotech WA Poll, 011573	37	-5.4	-3.2	0.1	3.4	9	-13
8	Monte Verde, 3.44	41	3.2	2.5	-1.2	-6.4	-10	9
9	Mulureen Merinos Poll, M2363	40	-16.3	-12.4	-0.2	1.1	-5	-3
10	Mulureen Merinos Poll, X728-03	42	-8.2	-16.8	-0.5	0.4	-13	12
11	Neerigen, 00.0054	40	-0.9	5.0	-0.7	-3.0	9	-10
12*	Nerstane, 990043	34	3.4	-0.4	0.4	-3.0	3	-2
13	The Grange, 303251	30	18.9	15.3	-1.8	-2.2	-3	4
14	Wallinar, 500G-02	46	6.9	13.4	0.8	-0.9	0	6
15	Woolkabin, 1.155	41	-3.6	-7.7	0.7	0.4	-13	9
Average performance			3.4	2.2	16.3	41.6	26 %	19 %

* Link Sires: Sires evaluated by the site to provide links between years and sites so that the all site results can be combined into a single report – *Merino Superior Sires*.

^ 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%

Note: Information on how to use the results in the table above can be found on page 6.

Tables 2 – Other measured traits

Sire Code	Sire name	Number of progeny	Flock Breeding Values (deviations)						
			H [^] FDCV %	HSL mm	HSS N/ktex	HFAT mm	HEMD mm	HCURV deg	HWEC %
1*	Ag WA Baseflock, 20002058	33	-0.6	0.0	-0.2	-0.8	0.1	-7.8	225.5
2	Billandri, 010764	32	2.3	7.7	-4.6	-0.5	2.3	-3.9	1.5
3	Coromandel Poll, OAB 420	46	1.1	-5.1	-5.1	1.0	-1.3	1.6	-38.2
4	Cranmore Park, 1.1	27	-1.4	4.2	4.3	0.8	0.4	0.5	174.6
5	Glenlea, 030305	34	-1.8	7.2	-3.7	0.3	-0.4	4.4	-6.0
6	Merinotech WA Poll, 011218	28	-1.9	-0.1	13.4	-0.1	0.8	5.9	-39.7
7	Merinotech WA Poll, 011573	37	0.6	6.3	-5.1	1.7	1.2	-4.8	-61.8
8	Monte Verde, 3.44	41	3.1	-11.6	-3.4	-1.1	-1.4	-2.4	46.0
9	Mulureen Merinos Poll, M2363	40	-0.7	-11.5	3.7	0.9	1.2	9.6	-16.4
10	Mulureen Merinos Poll, X728-03	42	-0.2	-6.6	-1.8	-0.3	-0.5	6.7	-6.5
11	Neerigen, 00.0054	40	-1.7	5.0	5.3	-0.3	0.1	1.6	-70.7
12*	Nerstane, 990043	34	-1.2	5.5	-2.5	-0.3	-1.3	-0.2	-36.5
13	The Grange, 303251	30	2.1	0.9	-8.1	-0.3	-1.6	5.7	284.9
14	Wallinar, 500G-02	46	-1.2	2.7	2.6	-0.9	-0.2	-11.2	-33.4
15	Woolkabin, 1.155	41	1.3	-4.7	5.1	-0.3	0.8	-5.7	-66.8
Average performance			21.5	76.8	23.4	2.2	23.8	105.3	

* Link Sires: Sires evaluated by the site to provide links between years and sites so that the all site results can be combined into a single report – *Merino Superior Sires*

^ Y = Yearling (300 to 400 days); H = Hogget (400 to 540 days); A = Adult (540 days and older)

Note: Information on how to use the results in the table above can be found on page 6.

Table 3a – Visual trait assessments – Wool Quality

Wool Quality trait scores are reported as the sire’s average (Av) score and the percentage of a sire’s progeny for each score.

Sire Code	Wool Quality																								
	Colour						Wool Character						Staple Weathering						Fleece Rot						
	Av	1	2	3	4	5	Av	1	2	3	4	5	Av	1	2	3	4	5	Av	0	1	2	3	4	5
1*	2.3	14	46	34	6	0	2.7	5	35	48	11	2	2.8	0	43	42	11	5	0.3	82	12	3	3	0	0
2	2.3	9	53	34	3	0	2.6	6	30	59	5	0	2.7	6	33	49	10	2	0.3	66	34	0	0	0	0
3	2.3	12	48	33	7	0	2.4	13	44	28	13	1	3	1	27	44	24	3	0.9	46	28	17	9	0	0
4	2.6	4	43	48	6	0	2.4	13	43	41	4	0	2.6	4	44	43	9	0	0.5	56	37	7	0	0	0
5	2.4	9	49	35	7	0	2.8	1	35	47	16	0	2.6	4	43	40	13	0	0.6	59	26	12	3	0	0
6	2	16	68	16	0	0	2.5	13	39	38	11	0	2.5	13	36	43	7	2	0.4	68	29	0	4	0	0
7	2.3	11	49	41	0	0	2.8	4	30	47	18	1	2.5	11	32	50	5	1	0.4	76	22	0	0	0	3
8	2.4	7	54	33	5	0	2.5	9	37	46	9	0	2.8	2	38	43	11	5	0.3	78	17	0	2	2	0
9	2.2	18	51	29	1	1	2.2	14	55	26	5	0	2.8	6	26	54	14	0	0.7	43	48	10	0	0	0
10	2.6	7	33	51	8	0	2.8	4	27	57	12	0	3.2	1	20	46	26	6	1	38	33	19	10	0	0
11	2.2	8	68	24	0	0	2.4	9	43	45	3	0	2.5	5	43	47	5	0	0.4	63	37	0	0	0	0
12*	2.1	15	60	24	1	0	2.7	4	40	41	13	1	2.6	4	43	43	9	1	0.4	64	30	6	0	0	0
13	2.6	5	35	50	10	0	2.9	0	27	53	20	0	2.8	5	32	47	12	5	0.5	63	27	10	0	0	0
14	2.5	9	47	35	9	1	2.2	27	36	27	10	0	2.9	0	39	38	17	5	0.7	50	33	13	4	0	0
15	2.6	7	29	59	5	0	2.2	17	48	32	4	0	3.2	1	15	51	30	2	1	41	29	15	15	0	0
Av	2.4	10.1	48.9	36.4	4.5	0.1	2.5	9.3	37.9	42.3	10.3	0.3	2.8	4.2	34.3	45.3	13.5	2.5	0.6	59.5	29.5	7.5	3.3	0.1	0.2

* Link Sires: Sires evaluated by the site to provide links between years and sites so that the all site results can be combined into a single report – *Merino Superior Sires*.

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

Note: Information on how to use the results in the table above can be found on page 7.

Table 3b – Visual trait assessments – Conformation and Pigmentation

Conformation trait scores are reported as the sire’s average (Av) score and the percentage of a sire’s progeny for each score. Jaw, back/shoulders and pigmented traits are reported as the number of progeny with a negative (Neg) expression of the trait.

Sire Code	Conformation																	Pigmentation						
	Face Cover						Neck and Body Development						Feet and Legs					Jaw	Back/Shoulder	Black Lamb	Wool	Skin		
	Av	1	2	3	4	5	Av	1	2	3	4	5	Av	1	2	3	4	5	Neg	Neg	Neg	Neg	Neg	
1*	1.9	35	42	23	0	0	2.2	12	63	22	2	2	2.4	6	52	37	3	2	1	0	0	0	0	0
2	2.6	14	38	31	13	5	2.2	14	55	28	3	0	2.6	2	48	41	9	0	0	0	0	0	0	2
3	2.5	16	41	29	10	4	2.1	19	59	18	4	0	2.5	3	51	35	10	1	0	2	0	0	0	3
4	1.8	40	45	13	2	0	1.8	28	63	7	2	0	2.3	11	52	33	4	0	0	0	0	0	0	4
5	1.5	59	32	7	1	0	1.6	41	53	6	0	0	2.4	1	65	29	4	0	1	0	0	0	0	3
6	1.8	30	61	7	2	0	2.3	14	48	34	4	0	2.5	4	59	29	5	4	0	1	0	0	0	6
7	1.5	61	32	7	0	0	1.6	45	46	9	0	0	2.4	8	53	31	3	5	0	2	0	0	0	1
8	2.9	7	30	41	14	9	2.6	6	43	33	19	0	2.5	1	57	37	4	1	0	1	0	0	0	3
9	1.8	39	48	10	4	0	1.8	29	61	10	0	0	2.4	1	64	34	1	0	0	0	0	0	0	0
10	2.2	31	36	18	11	5	2	19	61	17	4	0	2.5	1	51	43	5	0	0	2	0	0	0	3
11	2.1	19	57	16	7	1	2.1	17	60	20	3	0	2.4	0	65	32	3	0	0	1	0	0	0	0
12*	2.4	18	34	38	9	1	2.5	7	46	40	7	0	2.5	1	60	29	3	6	0	0	0	0	0	0
13	2.5	15	42	30	7	7	2.8	5	39	32	17	7	2.6	7	35	53	5	0	0	0	0	0	0	1
14	2	26	52	16	5	0	2.2	12	58	28	2	0	2.6	1	52	39	5	2	2	0	0	0	0	3
15	2	30	40	30	1	0	2	28	50	21	0	1	2.5	1	51	40	7	0	0	0	0	0	0	2
Av	2.1	29.3	42.0	21.1	5.7	2.1	2.1	19.7	53.7	21.7	4.5	0.7	2.5	3.2	54.3	36.1	4.7	1.4	0.3	0.6	0.0	0.0	0.0	2.1

* Link Sires: Sires evaluated by the site to provide links between years and sites so that the all site results can be combined into a single report – *Merino Superior Sires*.

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

Note: Information on how to use the results in the table above can be found on page 7.

Table 4 – Sire averages for measured traits

Sire code	Sire name	Number of progeny	Sire averages for measured traits (deviations)									
			H [^] GFW	HCFW	HFD	HWT	HFDCV	HSL	HSS	HCURV	HFAT	HEMD
			%	%	µm	kg	%	Mm	N/ktex	deg	mm	mm
1*	Ag WA Baseflock, 20002058	33	0.1	0.1	0.5	0.0	-0.4	-0.1	-0.3	-4.7	-0.1	0.1
2	Billandri, 010764	32	0.3	0.2	-0.5	1.1	1.5	4.5	-2.3	-2.6	-0.1	1.3
3	Coromandel Poll, OAB 420	46	-0.2	-0.2	-1.0	-0.8	0.7	-3.0	-3.1	0.8	0.1	-0.7
4	Cranmore Park, 1.1	27	0.0	0.0	0.4	0.2	-0.9	2.8	2.8	0.3	0.1	0.2
5	Glenlea, 030305	34	-0.2	-0.1	1.0	4.7	-1.0	4.1	-2.5	2.5	0.0	-0.4
6	Merinotech WA Poll, 011218	28	0.0	0.1	1.0	0.1	-1.2	0.3	8.8	3.7	0.0	0.5
7	Merinotech WA Poll, 011573	37	-0.1	0.0	0.0	1.5	0.4	3.7	-3.1	-3.0	0.2	0.5
8	Monte Verde, 3.44	41	0.1	0.0	-0.6	-3.0	1.9	-6.9	-1.9	-1.4	-0.1	-0.7
9	Mulureen Merinos Poll, M2363	40	-0.3	-0.2	-0.1	0.4	-0.4	-6.6	2.3	5.4	0.1	0.6
10	Mulureen Merinos Poll, X728-03	42	-0.2	-0.3	-0.3	0.3	0.0	-4.1	-1.4	3.7	0.0	-0.3
11	Neerigen, 00.0054	40	0.0	0.1	-0.4	-1.8	-1.1	3.2	3.3	1.2	0.0	0.1
12*	Nerstane, 990043	34	0.1	0.0	0.2	-1.7	-0.8	3.3	-2.1	0.2	0.0	-0.7
13	The Grange, 303251	30	0.4	0.2	-0.9	-0.9	1.2	0.5	-5.2	3.9	0.0	-0.9
14	Wallinar, 500G-02	46	0.1	0.2	0.4	-0.4	-0.7	1.5	1.5	-6.3	-0.1	0.0
15	Woolkabin, 1.155	41	-0.1	-0.1	0.3	0.4	1.0	-3.0	3.2	-3.7	-0.1	0.4
Average performance			3.4	2.2	16.3	41.6	21.5	76.8	23.4	105.3	2.2	23.8

* Link Sires: Sires evaluated by the site to provide links between years and sites so that the all site results can be combined into a single report – *Merino Superior Sires*.

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

Note: Information on how to use the results in the table above can be found on the bottom of page 6.

Table 5 – Wool quality and fleece value summary

Valuations were provided by Andrew Johnston from Wool Agency. N.B Rounding errors will cause some differences in calculations.

Sire name	GFW kg	Price cents/kg (greasy)	Fleece value \$/fleece
Ag WA Baseflock, 20002058	3.55	664	\$23.60
Billandri, 010764	3.72	737	\$27.44
Coromandel Poll, OAB 420	3.23	753	\$24.34
Cranmore Park, 1.1	3.38	697	\$23.54
Glenlea, 030305	3.19	556	\$17.73
Merinotech WA Poll, 011218	3.44	685	\$23.57
Merinotech WA Poll, 011573	3.3	695	\$22.96
Monte Verde, 3.44	3.48	749	\$26.04
Mulureen Merinos Poll, M2363	3.06	783	\$23.94
Mulureen Merinos Poll, X728-03	3.27	688	\$22.51
Neerigen, 00.0054	3.4	840	\$28.59
Nerstane, 990043	3.52	647	\$22.75
The Grange, 303251	3.88	701	\$27.18
Wallinar, 500G-02	3.56	709	\$25.25
Woolkabin, 1.155	3.37	675	\$22.71

* Link Sires: Sires evaluated by the site to provide links between years and sites so that the all site results can be combined into a single report – *Merino Superior Sires*.

Note: Information on how to use the results in the table above can be found on page 9.

YARDSTICK
2005 Drop