



**Balmoral Breeders**



## Elders Victoria Sire Evaluation Group

**2006 Drop 1st Evaluation of Progeny at 11 Months,  
11 Months Wool Growth**



Conducted by:  
The Elders Victoria Sire Evaluation Group  
Under the auspices of the Victorian Stud Merino Sheepbreeders' Association Inc.  
& Balmoral P & A Society

# Elders Victoria Sire Evaluation Group

## 2006 Drop 1st Evaluation of Progeny at 11 Months, 11 Months Wool Growth



**Conducted by:**  
The Elders Victoria Sire Evaluation Group  
under the auspices of the  
Victorian Stud Merino Sheepbreeders' Association  
& Balmoral P & A Society



*Proudly supported in sponsorship by:*



as **Gold Sponsor**

*Silver Sponsors:*



*Bronze Sponsors:*



*Report writing & production: Elders Victoria Sire Evaluation Group  
Data analysis: Andrew Swan (SGA) & Susan Jarvis*

November 2006

# CONTENTS

The information in this booklet should not be read in isolation – 2006 drop progeny at the time of their visual assessment were 11 months of age and were shorn with 11 months wool growth. This is the first assessment of the 2006 progeny in the Central Test Evaluation trials and results from this assessment will be reported in *Merino Superior Sires*.

	Page
<b>CONDUCT OF SIRE EVALUATION SCHEMES</b>	
Elders Victoria Sire Evaluation Group	3
Management Committee	3
Host Properties	3
Understanding the graphs & tables of results	4
<b>PARTICIPANTS IN 2006 TRIAL</b>	
Sire & Owner Summary	8
<b>MANAGEMENT REPORT</b>	
Main Events Calendar	9
<b>PRESENTATION OF RESULTS</b>	
<b>2006 drop 1st year evaluation results:</b>	
Summary:	
Figure 1: Summary Graph: Combined Measured Traits & Classer's Grades	10
Table A: MERINOSELECT Index Options & Classer's Grades	11
Figure 2: Summary Graph: Fleece Weight/Fibre Diameter	12
Tables 1 & 2 Measured and Scored Assessments	13
Figure 3. Summary Graph: Classer's Grades	15
Detailed Information:	
Table 3a: Measured Traits – Sire Least Square Means	16
Table 3b: Other Measured Traits – Sire Least Square Means	17
Table 4a: Classer's Assessment – Scored Wool Quality Traits	18
Table 4b: Classer's Assessment – Scored Visual Wool Counts and AWEX Style Grades	18
Table 4c: Classer's Assessment – Scored Conformation Traits	19
Table 4d: Pigmentation	19
Table 4e: Breech Scoring	20
Table 5: Fleece Value	21

## CONDUCT OF SIRE EVALUATION SCHEMES

This evaluation is an accredited sire evaluation program run under the guidelines of the Australian Merino Sire Evaluation Association (AMSEA). The established guidelines have been followed to enable an accurate and fair comparison of the Merino rams entered allowing the results to be published in the Merino Superior Sires report.

### ***Elders Victoria Sire Evaluation Group - Balmoral***

*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 (1998-2006), Balmoral and Horsham Shows and Hamilton Sheepvention. Participating studs have also provided static displays for viewing during field days. Since April 2000 successful annual Open Days have been held at "The Mountain Dam", "Kerrsville", "White Oaks", "Arundale" and "Tuloona" 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 there are now 10 progeny drops – 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006 & 2007. All trials are run for a minimum of 2 years.

- 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

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.

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

### ***The Management Committee:***

Tom Silcock (Chairman)	03 5388 2238	themountaindam@bigpond.com
Robert Plush	03 5575 0208	rjplush@bigpond.com
Robert Close	03 5570 4238	kurrawirra@ansoniacom.au
Stephen Silcock	03 5574 3202	sjsilcock@bigpond.com
Sue & Hugh Jarvis	03 5574 3298	suejarvis@bigpond.com
David Whyte	03 5572 2266	dwhyte@elders.com.au
Colin & Jill Frawley	03 5578 6334	wirra@ansoniacom.au
Michael Craig	03 5588 1395	tuloonapastoral@bigpond.com
Tania Rentsch	03 5576 5051	manager@balmoralbreeders.com

(Manager, c/- D Rendell & Assoc)

### ***Host Property for 2006 drop progeny***

The "Tuloona" property is owned by the Craig family and managed by son Michael and his wife Jane. The property is located 5km south of Harrow and consists of sandy loam soils over heavy clays on undulating red gum country. The average rainfall was 600mm, although since 2002 the rainfall has averaged only 515mm. Progeny are managed under strict commercial conditions.

## UNDERSTANDING THE RESULTS

### TABLES

Sire Identity:	Identity of breeder and the sire's number and/or name and code number located on some tables and graphs.
No. of Progeny:	Number of progeny assessed at time of event
Estimated Breeding Values:	Estimated Breeding Values (EBVs) express the expected performance of a sire relative to another sire in the evaluation when mated to a random allocation of ewes. EBVs are used to describe the performance of the major measured traits (see information on accuracy over page). They are expressed as deviations (dev) from the average of sires in the evaluation. Body Weight, Fibre Diameter, Coefficient of Variation of Fibre Diameter, Staple Strength and Staple Length EBVs are presented as deviations from the average, expressed in the same units as they were measured. Greasy and Clean Fleece Weights are percentages and 0% equals average.
Measured traits:	GFW% Greasy Fleece Weight (percentage) CFW% Clean Fleece Weight (percentage) FD $\mu$ m Average Fibre diameter (micron) WT Body Weight (kilograms) CV% Co-efficient of variation of fibre diameter Yld% Washing yield of the midside sample SL Staple Length (mm) SS Staple Strength (N/ktex)
WEC	Worm Egg Count. (WEC) breeding values relate to the susceptibility or resistance to infection by worms: WEC EBVs are expressed as a percentage relative to a count of 500 eggs per gram. An animal with a WEC EBV of -100% should have progeny with 50% lower worm burdens (or 250 epg) than progeny of an animal with a WEC EBV of 0% when the average worm burden is 500 epg.
Sire Least Square Means:	Sire least square means are the average performance of all the progeny assessed, but corrected for the number of progeny, sex and birth type.
Visual Traits:	The following Visual Traits were evaluated using the standard AMSEA scores and prior to publication of the new industry standard scores, as in "Visual Sheep Scores", September 2007. Most traits are scored 1 to 5, with '1' being best and '5' being worst. Many animals were scored '3', being neither bad nor outstandingly good. For some scores 2, 3 & 4 are best.
<i>Conformation</i>	<b>Face cover</b> – Scored 1 to 5. Scores of 2, 3, or 4 are most acceptable; scores of 1 (bare) or 5 (muffled) are less acceptable. <b>Shoulders/back</b> – Reported as percentage of the progeny with a negative expression. <b>Feet/legs</b> – Scored 1 to 5. (1 being best) <b>Neck/body development</b> – Scored 1 to 5. Scores of 2, 3 or 4 are most acceptable, scores of 1 or 5 are less acceptable (too heavy or too plain).
<i>Wool Quality</i>	<b>Mouth/Jaw</b> – Reported as percentage of progeny with a negative expression. <b>Wool Colour</b> – Scored 1 to 5. (1 being best) <b>Wool Character</b> – Scored 1 to 5. (1 being best) <b>Staple Weathering / Dust penetration</b> - Scored 1 to 5 (where '1' is best). <b>Fleece Rot</b> – Scored 0 to 5, '0' is no fleece rot, '1' slight fleece rot, '5' is extreme. <b>Scored Visual Wool Counts</b> – Assessed as 74's, 70's, 66's, 64's, 62's etc. A lower number means bolder crimp.

## Pigmentation

A **Black Lamb** is the result of a black recessive gene being present in both the sire and the dam (both sire and dam being Bb, or heterozygous). There is a 25% chance that the progeny of the Bb x Bb mating will be a 'black lamb' (bb). That any 'black lambs' resulted from a sire confirms that the sire carries the black recessive gene. When a sire does not produce any 'black lambs' is no guarantee that it does not carry the black recessive gene, as it requires the ewes he is mated to be carriers for this 25% chance of expression to occur.

**Skin Pigmentation:** significant degree of pigmented skin on non wool growing areas (typically smutty nose/brown rimmed eyes), reported as percentage of progeny with skin pigmentation

**Wool Pigmentation:** pigmented wool in random spots or isolated pigment or pigmented birthcoat, halo-hair, or pigmented leg hair or black lamb, noted at tagging, visual classing or shearing and shown as a percentage of progeny with wool pigmentation.

Breeding Objective index options provide the relative value of sires based on a combination of the measured traits. It should be noted that these are only some of the many indexes that can be used to describe an individual breeder's objective for measured traits. If a breeder uses a sire, the relative performance of the flock must be considered to establish the change that can be expected.

## Index Options:

Four of the Sheep Genetics MERINOSELECT indexes – 3.5%, 7% and 14% Micron Premium (MP) for Merinos and 10% MP+ SS +WEC for Fine Merinos – have been chosen as the base indexes for this site to provide combined measured trait results.

## Production system description

### 1. Merino indexes

- self-replacing Merino flock.
- 19 to 23 micron adult ewes fleece (850c/kg clean).
- adult wethers are not maintained to produce wool.
- Surplus wethers and ewes are sold as store or meat sheep at yearling to hogget age at 44kg (\$45/head).

### 2. Fine Merino indexes

- self-replacing Merino flock.
- 19 micron or finer adult ewes fleece (1300c/kg clean).
- 30% of adult sheep are wethers maintained to produce wool.
- surplus wethers and ewes are sold as store or meat sheep at yearling to hogget age at 40kg (\$40/head).

## Predicted genetic response

### 3.5% MP Merino

Fleece weight	high gain
Fibre diameter	maintain
Body weight	moderate gain
Other traits	maintain

### 7% MP Merino

Fleece weight	moderate gain
Fibre diameter	moderate gain
Body weight	moderate gain
Other traits	maintain

### 14% MP Merino

Fleece weight	maintain
Fibre diameter	high gain
Body weight	moderate gain
Other traits	maintain

### 10% MP + SS + WEC Fine Merino

Fleece weight	moderate gain
Fibre diameter	moderate gain
Body weight	small gain
SS	moderate gain
WEC	moderate gain
Other traits	maintain

Classer's Grade:	In the 2000 drop Assessment the Committee changed to one Classer to grade all assessed progeny as Tops, Flocks or Culls, based on visual assessment of all traits. The percentage of Tops, Flocks and Culls is presented. This change is in line with changes to Sire Evaluation requirements.
Fleece Value:	The combination of fibre diameter, style grade, staple length, staple strength, yield, and vegetable matter is used to value fleeces. Estimates of clean price (c/kg) were obtained using AWI's Woolcheque website ( <a href="http://www.woolcheque.com.au">http://www.woolcheque.com.au</a> ), using style grade MF4 (best topmaker) and vegetable matter of 1.0% for all sire groups, as well as averages for sire progeny groups for fibre diameter, staple length, staple strength calculated as Overall Mean + (Estimated Breeding Value/2). The Least Square Mean for Yield was used in the absence of an EBV for this trait. The price in cents/kg clean was then multiplied by the clean fleece weight (mean calculated using EBV <sup>1</sup> ) for each sire, to arrive at the fleece value (\$/fleece). No qualifiers for colour or other wool faults were used. Table 5 shows the average fleece value for each progeny group. Prices were from the preceding 12 months for the Southern region. Calculated clean fleece weight = 2.04 x (1+(EBV <sub>CFW</sub> /200))
Progeny Group Classing:	Assessment of the evenness of sire progeny groups is carried out as a separate assessment to individual classing. It is conducted in the 2 <sup>nd</sup> year of assessment.

## SUMMARY GRAPHS

Performance distribution graphs provide a summary of performance of sires for two traits such as Fleece Weight and Fibre Diameter. Use the labels on the graph to obtain a general idea of the performance of sires in that area of the graph, e.g. High Fleece Weight / Low Fibre Diameter (see Figure 2).

## ACCURACY OF ESTIMATED BREEDING VALUES

Estimated Breeding Values (EBVs) express the expected performance of a sire relative to performance of another sire in the evaluation when mated to the same standard of ewes. The expected performance of the progeny is the Estimated Breeding Value divided by 2 (EBV/2), as progeny get half their genes from their sire and half their genes from their dam.

EBVs are more accurate indicators of a sire's relative genetic merit than simple sire averages as they take into account:

- how much of the superiority is actually due to the sire's genes and can be passed on to its progeny;
- the number of progeny a sire has in the analysis;
- the performance of other related traits,
- non-genetic effects such as whether animals are born as singles or twins.

The 'true' Breeding Value of a sire would be obtained if the number of progeny evaluated for each sire was infinite. Because the number of progeny for each sire in the evaluation is not infinite, performance shown in this report is described as *Estimated* Breeding values.

The correlation (similarity) between the *Estimated* Breeding Value and the *True* Breeding Value increases as

- i) the number of progeny is increased, and
- ii) the heritability of the trait is greater.

If the number of progeny were infinite the correlation between the *Estimated* and *True* Breeding Value would be perfect (described as 100%). For a highly heritable trait (0.5) such as fibre diameter, the correlation between *Estimated* 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. Traits with lower heritabilities require more progeny to reach the same level of accuracy.

## **ALLOWANCE FOR TWINS/TRIPLETS**

### **Visual Assessment:**

No allowance was made in the visual assessment for multiple births.

**Objective Analysis:** An allowance was made by SGA analysis program, OVIS, for twins and triplets when analysing measurement data.

## **LINKING CENTRAL TEST DATA USING LOCAL SITES**

Link sires provide the “link” between other local sites and are used in combined Central Test Sire Evaluation reports to report across sites and across years. These “link sires” are a vital component of the Central Test Sire Evaluation. To become a “link sire”, the ram must have participated in evaluation of their progeny across more than one site. Each year the publication *Merino Superior Sires* is produced which reports the combined analysis of rams participating across all Australian Local Sites.

The information in this booklet therefore should not be read in isolation. These progeny are now reported in this document for their first assessment in 2006. A second and final assessment will be undertaken in 2007.

## **CHANGES TO THE CENTRAL TEST GROUP**

In 2000 the Central Test Sire Evaluation Committee run under the auspices of the Australian Association of Stud Merino Breeders voted to become an independent group and is now known as the Australian Merino Sire Evaluation Association (AMSEA). Updated CTSE accreditation requirements were adopted in April 2000 and continue to be modified by AMSEA as a gradual improvement program for the most accurate data collection and analysis.

The Victorian Stud Merino Sheepbreeders’ Association continues to support Victorian Sire Evaluation Trials and the Elders Victoria Sire Evaluation Trial is conducted under the auspices of both the Victorian Stud Merino Sheepbreeders’ Association and the Balmoral Pastoral and Agricultural Society.



## PARTICIPANTS IN THE 2006 TRIAL

### SIRE & OWNER DETAILS

<b>Stud Sire Identity</b>	<b>Contact Name, Address, Phone &amp; Fax No. &amp; Email</b>
<b>Avington 03-086</b> 6012892003030086	Noel & Lindsay Henderson, 504 Sidonia Rd Sidonia VIC 3444 Ph 03 5423 7100 Fax 03 5423 7101 Email: <a href="mailto:derek.mason@avingtonfarm.com">derek.mason@avingtonfarm.com</a>
<b>Bindawarra 0400</b> 5038922003030400	Murray Toland, PO Box 131 Omeo VIC 3898 Ph 03 5159 1362 Fax 03 5159 1361 Email: <a href="mailto:bindawarra@bordnet.com.au">bindawarra@bordnet.com.au</a>
<b>Goodwood BW1143/01 *</b> 5038922001011143	Richard Alexander, Pattisons Lane Glenthompson VIC 3293 Ph 03 5577 8265 Fax 03 5577 8256 Email: <a href="mailto:goodwoodmerino@datafast.net.au">goodwoodmerino@datafast.net.au</a>
<b>Hazeldean 1.10014</b> 5003832001010014	Jim Litchfield, Hazeldean Pty Ltd, Cooma NSW 2630 Ph 02 6453 5555 Fax 02 6453 5526 Email: <a href="mailto:admin@hazeldean.com">admin@hazeldean.com</a>
<b>Hyfield 3723</b> 6007172004043723	Kevin Keatley, RMB 619 Kojonup WA 6395 Ph 08 9831 1760 Fax 08 9831 1763 Email: <a href="mailto:hyfield@wn.com.au">hyfield@wn.com.au</a>
<b>Kerrsville SY 21108</b> 6012172002S21108	Robert Push, 1885 Coleraine-Edenhope Rd Coleraine VIC 3315 Ph 03 5575 0208 Fax 03 5575 0208 Email: <a href="mailto:rjplush@bigpond.com">rjplush@bigpond.com</a>
<b>Melrose TD696-03</b> 50170420030TD696	Warren Russell, 112 Russells Rd Nurrabiel Horsham VIC 3401 Ph 03 5388 1243 Fax 03 5388 1246 Email: <a href="mailto:melrose@wimmera.com.au">melrose@wimmera.com.au</a>
<b>Merinotech Vic 041629</b> 5046482004041629	Hugh & Susan Jarvis, 8338 Natimuk-Hamilton Rd Gatum VIC 3407 Ph 03 5574 3298 Fax 03 5574 3299 Email: <a href="mailto:suejarvis@bigpond.com">suejarvis@bigpond.com</a>
<b>Pastora Black 800</b> 6010901999000800	Peter Westblade, Pastora 22 Drummond St Lockhart NSW 2656 Ph 02 6920 5681 Fax 02 6920 5682
<b>Pleasant Park HS Bkck tag</b> 50170820020HS123	Phillip Walker, Pleasant Park Goroke VIC 3412 Ph 03 5386 1202 Fax 03 5386 1202 Email: <a href="mailto:pleasantpark@eldersnet.com.au">pleasantpark@eldersnet.com.au</a>
<b>The Mountain Dam 04/NAH015</b> 5045722004NAH015	Tom & Alison Silcock, 429 Silcocks Rd Telangatuk East VIC 3401 Ph 03 5388 2238 Fax 03 5388 2235 Email: <a href="mailto:themountaindam@bigpond.com">themountaindam@bigpond.com</a>
<b>Toland Poll Yellow 1474</b> 6010822005051474	Phil Toland, RMB 2005 Feltrim Rd Violet Town VIC 3669 Ph 03 5798 1605 Fax 03 5798 1404 Email: <a href="mailto:toland@iinet.net.au">toland@iinet.net.au</a>
<b>Tuloona 2047</b> 5092132001012047	Michael Craig, Tuloona Pastoral 271 Greens Lane Harrow VIC 3317 Ph 03 5588 1395 Fax 03 5588 1394 Email: <a href="mailto:tuloonapastoral@bigpond.com">tuloonapastoral@bigpond.com</a>
<b>Windarra 04/0236</b> 5043382004040236	Tom Hanson 3 Rutland Ave Unley Park SA 5061 Ph 08 8271 2656 Fax 08 8272 2145 Email: <a href="mailto:tomhanson@ozemail.com.au">tomhanson@ozemail.com.au</a>

\* **2006 Link Sires** — these sires provide the “link” between other accredited Sire Evaluation Sites and Years and have participated in evaluation of their progeny across more than one site

## MANAGEMENT REPORT – 2006 drop Progeny – “Tuloona”

### **Ewe Base:**

Ewes for the 2006 trial were selected from a random draft of “Tuloona” three year old commercial fine wool ewes. The average adult flock micron at “Tuloona” in 2006 was 17.7 micron.

### **2006 Progeny Location:**

“Tuloona” is located approximately 5 kilometres from the township of Harrow in the Western Districts of Victoria. Average annual rainfall is approximately 575mm.

### **Stock Management/Seasonal Conditions**

The 2006 progeny were dropped during relatively good lambing conditions, and despite enduring a failed spring, their weaning weights were exceptionally good at over 27kg average. Feeding commenced in November while still on their mothers and continued on until mid May at rates of up to 2.7kg of beans and pellets per week because of the drought conditions. After the much needed autumn break the progeny continued to grow well during the 2007 winter and during the average 2007 spring. . The lessons learnt during the drought on the importance of managing weaners with appropriate rations to encourage growth were invaluable for future production of these sheep.

**Michael Craig**

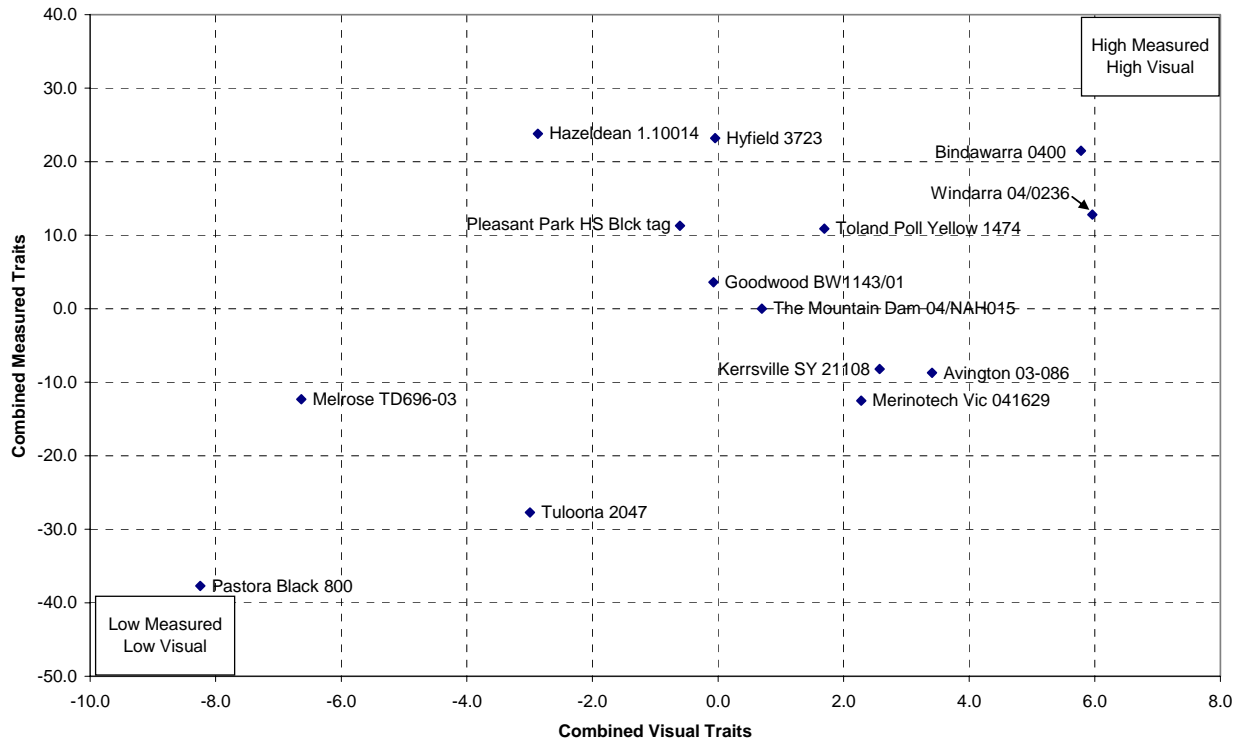
### **The Evaluation & Management Program 2006 drop progeny:**

6 <sup>th</sup> - 7 <sup>th</sup> March 2006	Laparoscopic insemination of 825 ewes, conducted by Brecon Breeders
5 <sup>th</sup> May 2006	Ultrasound/scan ewes by Mark Jenkinson; drafted ewes into groups of singles and twins
28 <sup>th</sup> July 2006	Drenched and vaccinated ewes, drafted into sire groups for lambing
1 <sup>st</sup> August 2006	Ewes commenced lambing
2 <sup>1st</sup> August 2006	Lambs tagged and scored
12 <sup>th</sup> September 2006	Marked and mulesed lambs, vaccinated, scored for tail and breach wrinkle
30 <sup>th</sup> October 2006	Weaned lambs, 2 <sup>nd</sup> vaccination, 1 <sup>st</sup> summer drench, lambs body weighed (weaning weights)
25 <sup>th</sup> February	Progeny crutched & vaccinated
17 <sup>th</sup> March 2007	Progeny on display at Balmoral Show
3 <sup>rd</sup> April 2007	Progeny on display at Open day
26 <sup>th</sup> June 2007	Mid side sampling and 1 <sup>st</sup> visual classing of progeny (11 months wool)
18 <sup>th</sup> July 2007	1 <sup>st</sup> shearing (11.5 months wool)
30 <sup>th</sup> July 2007	Individual WEC samples collected
16 <sup>th</sup> August 2007	Body weighing (yearling weight)

**Classer for 2006 Drop Progeny : Mr Ross Dickinson, Elders Ltd.**

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

Figure 1: Summary Graph – Combined Measured Traits and Classer's Grade  
2006 drop – 1st Evaluation



Summary graph using the 7% Breeding Objective Index Option has been used to combine Measured Traits and Classer's Tops & Culls has been used to combine Visual Traits.

Combined Visual is calculated as  $(\text{Tops \%} - \text{Culls \%})/5$ , expressed as a deviation from  $(\text{Average Tops \%} - \text{Average Culls \%})/5$ .  
Combined Measured is calculated as  $(7\% \text{ MP Index} - 100)$

Example:

Windarra 04/0236

Tops % = 45.16 %

Culls % = 3.23 %

7% MP Index = 112.8

Average Tops% = 28.36 %

Average Culls% = 16.23 %

Combined Visual =  $((45.16 - 3.23)/5) - ((28.36 - 16.23)/5) = 41.94/5 - 12.13/5 = 8.39 - 2.43 = 5.96 \%$

Combined Measured =  $112.8 - 100 = 12.80$

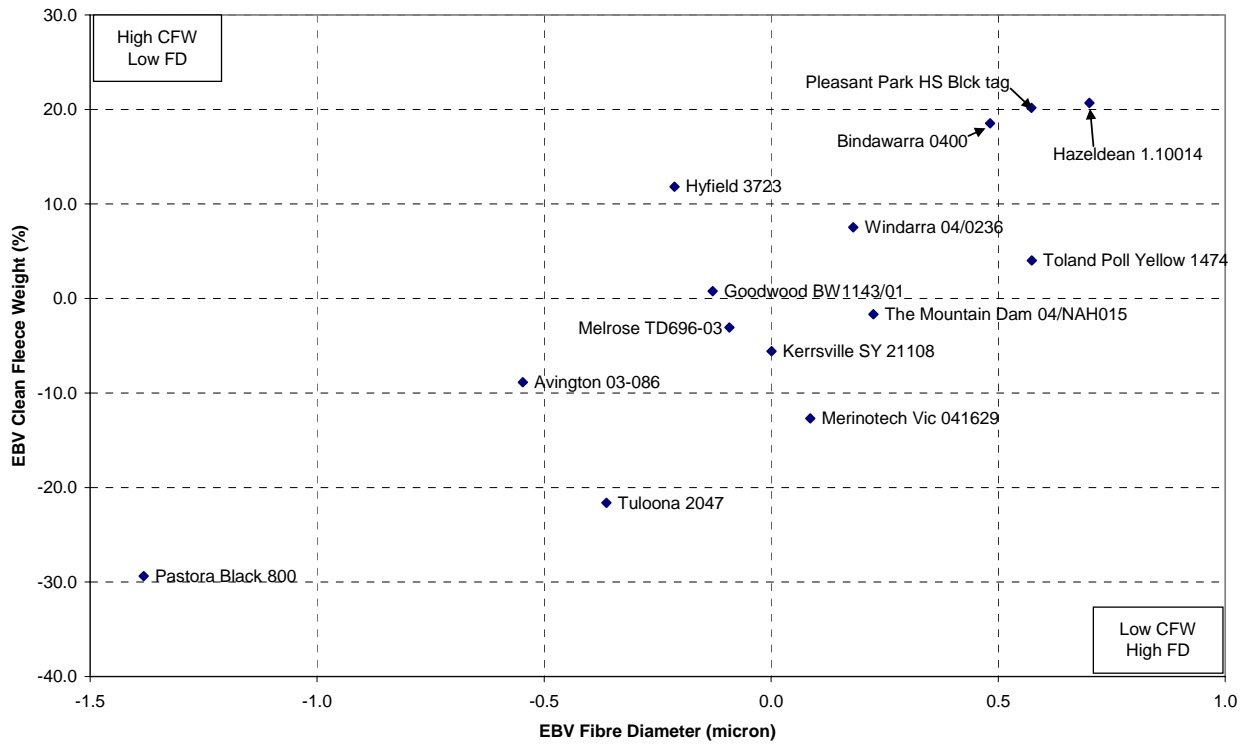
**Table A – MERINOSELECT Index Options and Classer’s Grade  
2006 drop - 1<sup>st</sup> Evaluation**

Sire Identity	No of progeny	MERINOSELECT Index Options				Classer’s Grade %		
		Merino			Fine	Tops %	Flocks %	Culls %
		3.5% MP	7% MP	14% MP	10% MP + SS + WEC			
Avington 03-086	48	89	91	96	74	42	46	13
Bindawarra 0400	39	128	122	111	118	59	23	18
Goodwood BW1143/01 *	34	100	104	106	118	24	65	12
Hazeldean 1.10014	45	127	124	116	116	13	71	16
Hyfield 3723	42	126	123	117	119	21	69	10
Kerrsville SY 21108 *	44	91	92	95	105	27	70	2
Melrose TD696-03	19	89	88	90	84	11	58	32
Merinotech Vic 041629	34	82	88	95	101	38	47	15
Pastora Black 800	55	54	62	78	82	9	53	38
Pleasant Park HS Blck tag	44	124	111	98	82	30	50	20
The Mountain Dam 04/NAH015	32	103	100	97	52	31	53	16
Toland Poll Yellow 1474	34	113	111	107	118	29	62	9
Tuloona 2047	35	63	72	86	77	20	57	23
Windarra 04/0236	31	113	113	110	113	45	52	3
Average	38	100	100	100	100	28	55	16

\* **Link Sires** — these sires provide the “link” between other accredited Sire Evaluation Sites and Years and have participated in evaluation of their progeny across more than one site.

Classer’s Grade is expressed as a percentage of a sire’s progeny.

Figure 2 - Summary Graph Fleece Weight/Fibre Diameter  
2006 drop - 1<sup>st</sup> Evaluation



Tables 1 & 2– Measured and scored assessments – 2006 drop – 1<sup>st</sup> Evaluation

**Table 1. Major Measured Traits – Estimated Breeding Values and Classer’s Grade**

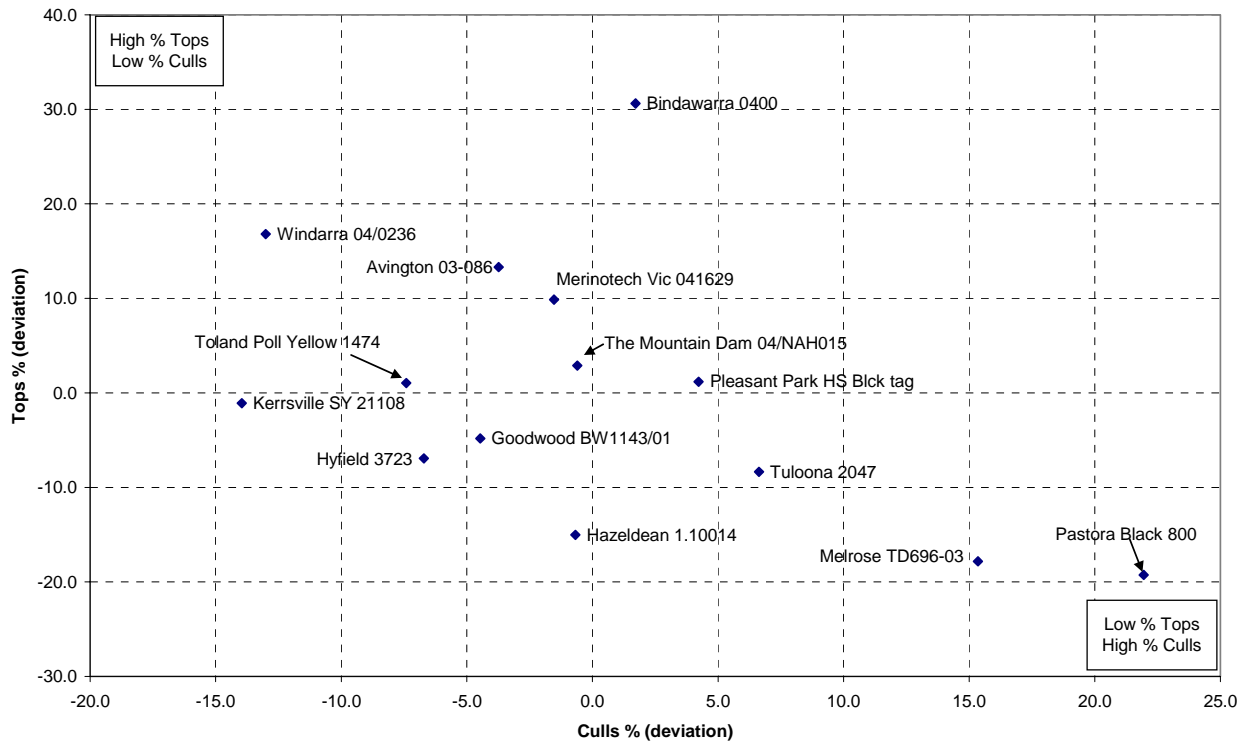
Sire Identity	No of progeny	Estimated Breeding Values				Classer’s Grade		
		GFW %	CFW %	FD $\mu$ m	WT kg	Tops %	Flocks %	Culls %
Avington 03-086	48	-11.0	-8.9	-0.5	-0.6	42	46	13
Bindawarra 0400	39	14.9	18.5	0.5	4.4	59	23	18
Goodwood BW1143/01 *	34	-4.0	0.8	-0.1	-2.1	24	65	12
Hazeldean 1.10014	45	16.9	20.7	0.7	-0.9	13	71	16
Hyfield 3723	42	11.5	11.8	-0.2	6.1	21	69	10
Kerrsville SY 21108 *	44	-3.7	-5.6	0.0	-0.9	27	70	2
Melrose TD696-03	19	-5.4	-3.1	-0.1	-5.3	11	58	32
Merinotech Vic 041629	34	-14.2	-12.7	0.1	1.0	38	47	15
Pastora Black 800	55	-29.2	-29.4	-1.4	-7.7	9	53	38
Pleasant Park HS Bkck tag	44	22.8	20.2	0.6	-2.5	30	50	20
The Mountain Dam 04/NAH015	32	4.4	-1.7	0.2	5.5	31	53	16
Toland Poll Yellow 1474	34	4.9	4.0	0.6	8.2	29	62	9
Tuloona 2047	35	-20.2	-21.6	-0.4	-6.1	20	57	23
Windarra 04/0236	31	13.0	7.5	0.2	1.0	45	52	3
Average	38	3.6 kg	2.5 kg	15.9 $\mu$ m	35.2 kg	28 %	55 %	16 %

**Table 2. Other Measured Traits – Estimated Breeding Values**

Sire Identity	No of progeny	Estimated Breeding Values				
		CV %	Curvature deg/mm	Staple Strength N/ktex	Staple Length mm	WEC %*
Avington 03-086	48	-0.2	3.2	-4.5	-1.3	97.4
Bindawarra 0400	39	0.0	-6.5	0.7	1.8	-26.1
Goodwood BW1143/01 *	34	-0.6	-4.6	5.4	2.1	-53.1
Hazeldean 1.10014	45	-1.2	-8.6	6.1	7.5	17.1
Hyfield 3723	42	0.1	-5.2	0.1	0.3	-12.9
Kerrsville SY 21108 *	44	-0.8	2.5	-1.5	0.2	-56.4
Melrose TD696-03	19	1.6	3.9	-1.0	-7.2	30.4
Merinotech Vic 041629	34	-1.7	3.0	1.9	-0.3	-44.4
Pastora Black 800	55	2.4	3.9	-3.1	-12.9	-34.5
Pleasant Park HS Bkck tag	44	1.9	-11.6	-5.7	5.4	98.9
The Mountain Dam 04/NAH015	32	0.2	1.5	-4.0	-0.7	214.0
Toland Poll Yellow 1474	34	-1.9	2.2	-0.7	12.2	-65.5
Tuloona 2047	35	0.1	11.2	3.1	-9.2	35.0
Windarra 04/0236	31	0.0	4.6	3.4	2.5	-4.9
Average	38	20.4 %	92.0 deg/mm	35.7 N/ktex	72.8 mm	255 epg

\* Percentage reduction in average WEC (see page 4)

Figure 3 - Summary Graph Classer's Grades - 2006 drop - 1st Evaluation





**Tables 3 – Measured traits – 2006 drop – 1<sup>st</sup> Evaluation**

**Table 3a. Measured Traits<sup>1</sup> – Sire Least Square Means\***

Sire Identity	No of progeny	GFW	CFW	FD	WT	CV	Curv.	SS	SL
Avington 03-086	48	3.1	2.1	15.7	32.6	19.9	97.1	32.1	71.3
Bindawarra 0400	39	3.6	2.5	16.2	35.1	19.9	91.1	35.8	73.0
Goodwood BW1143/01 *	34	3.2	2.2	15.9	31.9	19.6	92.9	39.1	73.3
Hazeldean 1.10014	45	3.6	2.5	16.3	32.5	19.2	90.8	39.0	76.3
Hyfield 3723	42	3.5	2.4	15.8	36.1	20.0	92.5	35.2	72.0
Kerrsville SY 21108 *	44	3.2	2.2	15.9	32.3	19.5	96.8	33.9	72.0
Melrose TD696-03	19	3.2	2.2	15.9	29.9	21.2	99.1	34.1	67.2
Merinotech Vic 041629	34	3.0	2.1	16.0	33.3	19.0	96.7	36.3	71.9
Pastora Black 800	55	2.7	1.9	15.2	29.7	21.5	96.8	33.4	64.8
Pleasant Park HS Bkck tag	44	3.8	2.6	16.2	31.8	21.1	88.5	31.2	75.0
The Mountain Dam 04/NAH015	32	3.4	2.2	16.0	35.7	20.2	96.2	32.0	71.3
Toland Poll Yellow 1474	34	3.5	2.3	16.2	37.4	18.8	96.7	34.8	79.3
Tuloona 2047	35	2.8	1.9	15.7	29.8	20.2	102.6	37.0	66.6
Windarra 04/0236	31	3.6	2.4	16.0	33.4	20.0	98.7	37.5	73.4
Average	38	3.6 kg	2.5 kg	15.9 µm	35.2 kg	20.4 %	92.0 deg/mm	35.7 N/ktex	72.8 mm

<sup>1</sup> Measured traits presented as EBVs in Tables 1 and 2

\* Least Square Means – corrected for number of progeny, sex and birth type

**Table 3b. Other Measured Traits – Sire Least Square Means\***

Sire Identity	No of progeny	Yld	Spin. F.	Std. Dev.	Comfort Factor
Avington 03-086	48	68.8	15.1	3.1	100.0
Bindawarra 0400	39	69.3	15.7	3.2	99.9
Goodwood BW1143/01 *	34	69.9	15.3	3.1	100.0
Hazeldean 1.10014	45	69.3	15.6	3.1	99.9
Hyfield 3723	42	67.9	15.3	3.2	99.9
Kerrsville SY 21108 *	44	67.2	15.3	3.1	100.0
Melrose TD696-03	19	69.1	15.5	3.4	99.9
Merinotech Vic 041629	34	68.9	15.3	3.0	100.0
Pastora Black 800	55	67.8	14.9	3.3	99.9
Pleasant Park HS Bkck tag	44	67.1	15.8	3.4	99.9
The Mountain Dam 04/NAH015	32	65.4	15.5	3.2	100.0
Toland Poll Yellow 1474	34	67.5	15.5	3.0	100.0
Tuloona 2047	35	67.2	15.2	3.2	99.9
Windarra 04/0236	31	66.0	15.5	3.2	99.9
Average	38	69.2 %	15.4 µm	3.2 µm	99.9 %

\* Least Square Means – corrected for number of progeny, sex and birth type

**Tables 4. Classer's Assessment – 2006 drop – 1st Evaluation**

A sire's average score and the percentage of a sire's progeny for each score are reported.

**Table 4a. Scored Wool Quality Traits**

	Colour					Character					Staple Weathering					Fleece Rot									
	best		worst			best		worst			best		worst			best		worst							
Sire Identity	Avg	1	2	3	4	5	Avg	1	2	3	4	5	Avg	1	2	3	4	5	Avg	0	1	2	3	4	5
Avington 03-086	2.5	6	42	50	2		3.0		29	46	23	2	2.8		27	67	6		0.00	100					
Bindawarra 0400	2.6	5	38	46	10		2.4	3	59	31	8		2.6		46	51	3		0.03	97	3				
Goodwood BW1143/01	2.5		50	47	3		2.9		32	44	24		2.5	3	47	50			0.00	100					
Hazeldean 1.10014	3.0	2	16	62	20		2.9		29	49	22		2.9		18	78	4		0.11	89	11				
Hyfield 3723	3.0	2	10	79	10		2.8		38	45	17		3.0		12	79	10		0.22	85	7	7			
Kerrsville SY 21108	2.4		59	39	2		2.6	2	39	55	5		2.9		16	82	2		0.00	100					
Melrose TD696-03	2.8		32	58	11		2.9		26	58	11	5	3.1		11	74	16		0.05	95	5				
Merinotech Vic 041629	2.6	3	41	53	3		2.9		38	35	26		2.8		24	76			0.00	100					
Pastora Black 800	2.7		38	51	11		2.8		40	36	24		3.0		13	75	13		0.02	98	2				
Pleasant Park HS Bkck tag	2.9	2	19	67	12		2.9		30	50	18	2	2.9		23	68	9		0.05	98		2			
The Mountain Dam 04/NAH015	2.6	3	34	63			3.1		16	59	25		2.9		13	81	6		0.00	100					
Toland Poll Yellow 1474	3.0		12	74	15		3.1		29	38	26	6	3.0		12	76	12		0.15	94		3	3		
Tuloona 2047	2.2	9	60	31			3.1		20	51	29		2.8		26	69	6		0.00	100					
Windarra 04/0236	2.7	6	39	35	19		2.6	3	39	52	6		2.7		35	61	3		0.00	100					
Average	2.7	3	35	54	8		2.9	1	34	46	19	1	2.8		23	71	6		0.04	97	2	1			

**Table 4b. Scored Visual Wool Counts and AWEX Style Grades**

Sire Identity	60	64	70	74	MWF4E	MWF5E
Avington 03-086	10	21	63	6	100	
Bindawarra 0400	10	36	54		100	
Goodwood BW1143/01	15	38	44	3	100	
Hazeldean 1.10014	31	38	31		100	
Hyfield 3723	19	48	33		95	5
Kerrsville SY 21108	7	20	68	5	100	
Melrose TD696-03	5	5	84	5	100	
Merinotech Vic 041629	9	38	47	6	100	
Pastora Black 800	2	15	71	13	98	2
Pleasant Park HS Bkck tag	20	27	52		100	
The Mountain Dam 04/NAH015		19	69	13	100	
Toland Poll Yellow 1474	24	38	38		100	
Tuloona 2047			66	34	100	
Windarra 04/0236	6	32	61		100	
Average	12	27	55	6	99	1

Note rows appear not to always sum to 100. This is due to rounding to nearest percentage.

**Table 4c. Scored Conformation Traits**

	Face					Neck / Body Development					Feet / Legs					Jaw	Back / Shoulder			
	* acceptable *					* acceptable *					best		worst							
Sire Identity	Avg	1	2	3	4	5	Avg	1	2	3	4	5	Avg	1	2	3	4	5	Neg <sup>1</sup>	Neg <sup>1</sup>
Avington 03-086	3.0		19	65	10	6	3.0	2	21	48	29		1.8	33	58	8				
Bindawarra 0400	3.1		15	72	5	8	3.1	3	21	44	33		1.7	36	56	5	3			5
Goodwood BW1143/01	3.1		18	59	21	3	2.8		35	53	12		1.9	24	68	9				
Hazeldean 1.10014	3.1		16	62	18	4	3.3		9	53	38		1.9	16	76	9				2
Hyfield 3723	3.3		5	67	24	5	3.0	2	19	52	26		1.8	31	60	10				
Kerrsville SY 21108	3.0		20	57	23		3.0	2	20	57	20		1.8	25	70	5				
Melrose TD696-03	3.5			58	37	5	3.3		11	47	42		1.9	26	58	16				
Merinotech Vic 041629	3.4		9	59	21	12	2.9	3	26	53	18		1.9	21	68	12				
Pastora Black 800	3.5		2	56	36	5	3.4		11	45	40	4	2.1	15	64	22				5
Pleasant Park HS Bck tag	3.3		5	66	25	5	3.3		11	50	34	5	2.0	14	68	18				
The Mountain Dam 04/NAH015	3.1	3	16	56	16	9	3.0	3	25	38	34		2.0	19	69	9	3			3
Toland Poll Yellow 1474	2.6		47	47	6		2.7		32	62	6		1.6	44	56					
Tuloona 2047	3.5		6	54	26	14	2.7	6	37	43	14		2.1	9	71	17	3			3
Windarra 04/0236	3.0		13	77	10		3.2		13	55	32		1.6	42	58					3
Average	3.2		13	61	20	5	3.1	1	20	50	27	1	1.9	25	65	10	1			2

\* Face and Neck/Body Development traits: scores of 2, 3 and 4 are most acceptable, scores of 1 and 5 are less acceptable

<sup>1</sup> The percentage of progeny with negative expression of the trait is described

**Table 4d. Pigmentation**

	Black Lamb	Wool	Skin
Sire Identity	Neg <sup>1</sup>	Neg <sup>1</sup>	Neg <sup>1</sup>
Avington 03-086		4	24
Bindawarra 0400		2	78
Goodwood BW1143/01			25
Hazeldean 1.10014		4	78
Hyfield 3723		2	64
Kerrsville SY 21108		2	51
Melrose TD696-03			48
Merinotech Vic 041629		3	65
Pastora Black 800		5	75
Pleasant Park HS Bck tag	2	4	57
The Mountain Dam 04/NAH015			71
Toland Poll Yellow 1474			34
Tuloona 2047			22
Windarra 04/0236		3	65
Average		2	55

<sup>1</sup> The percentage of progeny with negative expression of the trait is described

**Table 4e. Breech Scoring**

	Breech Wrinkle					Breech Bareness						
	Avg	1	2	3	4	5	Avg	1	2	3	4	5
Sire Identity	Avg	1	2	3	4	5	Avg	1	2	3	4	5
Avington 03-086	2.3	13	46	42			1.8	44	40	13	4	
Bindawarra 0400	2.4	10	48	40	3		1.8	38	50	8	5	
Goodwood BW1143/01	2.4	6	51	40	3		1.9	40	40	14	6	
Hazeldean 1.10014	2.2	19	49	23	6	2	1.5	53	43	4		
Hyfield 3723	2.4	11	49	33	7		1.7	42	44	13		
Kerrsville SY 21108	2.7	6	40	34	17	2	1.4	60	38	2		
Melrose TD696-03	2.5	19	33	29	14	5	1.4	57	43			
Merinotech Vic 041629	2.2	14	53	31	3		1.7	36	61	3		
Pastora Black 800	3.0	3	34	36	17	10	1.4	56	44			
Pleasant Park HS Blck tag	2.6	13	31	44	9	2	1.6	47	49	4		
The Mountain Dam 04/NAH015	2.3	21	41	29	6	3	1.6	47	50	3		
Toland Poll Yellow 1474	1.5	51	43	6			2.4	6	54	34	3	3
Tuloona 2047	2.5	3	49	43	5		1.7	43	46	11		
Windarra 04/0236	2.3	13	55	26	3	3	1.6	45	45	10		
Average	2.4	14	44	33	7	2	1.7	44	46	8	1	

**Definition of Breech Scores**

Breech Wrinkle      1 - 5      1 = plain      5 = heavy wrinkle  
Breech Bareness      1 - 5      1 = woolly      5 = bare

**Table 5. Calculated Fleece Value**

		Predicted Progeny Performance <sup>1</sup>						Price	Fleece value
		CFW <sup>2</sup>	FD	YLD <sup>3</sup>	Vm	SL	Str		
Sire Identity	AWEX ID	kg	µm	%	%	mm	N/ktex	cents/ kg clean	\$/fleece
Avington 03-086	MWF4	2.35	15.6	68.8	1	72	33	1427	\$33.53
Bindawarra 0400	MWF4	2.69	16.1	69.3	1	74	36	1441	\$38.72
Goodwood BW1143/01	MWF4	2.47	15.8	69.9	1	74	38	1533	\$37.85
Hazeldean 1.10014	MWF4	2.71	16.2	69.3	1	77	39	1503	\$40.78
Hyfield 3723	MWF4	2.60	15.8	67.9	1	73	36	1474	\$38.39
Kerrsville SY 21108	MWF4	2.39	15.9	67.2	1	73	35	1435	\$34.30
Melrose TD696-03	MWF4	2.42	15.8	69.1	1	69	35	1431	\$34.65
Merinotech Vic 041629	MWF4	2.30	15.9	68.9	1	73	37	1488	\$34.27
Pastora Black 800	MWF4	2.10	15.2	67.8	1	66	34	1475	\$30.94
Pleasant Park HS Bkck tag	MWF4	2.71	16.1	67.1	1	75	33	1384	\$37.47
The Mountain Dam 04/NAH015	MWF4	2.44	16.0	65.4	1	72	34	1401	\$34.16
Toland Poll Yellow 1474	MWF4	2.51	16.1	67.5	1	79	35	1434	\$35.97
Tuloona 2047	MWF4	2.19	15.7	67.2	1	68	37	1494	\$32.77
Windarra 04/0236	MWF4	2.55	16.0	66	1	74	37	1477	\$37.69

<sup>1</sup> Progeny performance predicted by using average for trait +EBV/2. See page 5 for further explanation

<sup>2</sup> Predicted progeny clean fleece weight =  $2.46 \times (1 + (\text{EBV}_{\text{CFW}}/200))$

<sup>3</sup> LS mean for yield used in absence of EBV for yield

Prices were obtained from AWI's Woolcheque website (<http://www.woolcheque.com.au>), using latest 12 month season and the Southern region.