



**Balmoral Breeders**

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## Elders Victoria Sire Evaluation Group

**2005 Drop 2nd Evaluation of Progeny at 23 Months,  
12 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

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Data analysis: Andrew Swan (SG) & Susan Jarvis*

November 2007

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The information in this booklet should not be read in isolation – 2005 drop progeny at the time of their assessment were 23 months of age and were shorn with 12 months wool growth. This is the second assessment of the 2005 progeny in the Central Test Evaluation trials and results from this assessment will be reported in *Merino Superior Sires*.

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## 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 (1998-2007), 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 Group Management Committee.

### **The Management Committee:**

|                        |              |                              |
|------------------------|--------------|------------------------------|
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| Tania Rentsch          | 03 5576 5051 | manager@balmoralbreeders.com |

(Manager, c/- D Rendell & Assoc)

### **Host Property for 2005 drop progeny**

The “Arundale” property, owned by Donald Cant and managed by Barry Matthews, is located 16 kms west of Balmoral on a predominately sandy, grey loam soil type in undulating red gum country. The average rainfall is 650 mm. 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)<br>CFW% Clean Fleece Weight (percentage)<br>FD $\mu$ m Average Fibre diameter (micron)<br>WT Body Weight (kilograms)<br>CV% Co-efficient of variation of fibre diameter<br>Yld% Washing yield of the midside sample<br>SL Staple Length (mm)<br>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.<br><b>Shoulders/back</b> – Reported as percentage of the progeny with a negative expression.<br><b>Feet/legs</b> – Scored 1 to 5. (1 being best)<br><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).<br><b>Mouth/Jaw</b> – Reported as percentage of progeny with a negative expression.   |
| <i>Wool Quality</i>        | <b>Wool Colour</b> – Scored 1 to 5. (1 being best)<br><b>Wool Character</b> – Scored 1 to 5. (1 being best)<br><b>Staple Weathering / Dust penetration</b> - Scored 1 to 5. (where '1' is best).<br><b>Fleece Rot</b> – Scored 0 to 5, '0' is no fleece rot, '1' slight fleece rot, '5' is extreme.<br><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.<br>Table 5 shows the average fleece value for each progeny group. Prices were from the preceding 12 months for the Southern region.<br>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 2nd year of assessment. Evenness of each group was scored from 1 (most even) to 5 (highly variable).  |

## 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 2005 TRIAL

### SIRE & OWNER DETAILS

| <b>Stud Sire Identity</b>                            | <b>Contact Name, Address, Phone &amp; Fax No. &amp; Email</b>  |
|--|--|
| <b>Coonewarran 30134</b><br>5047042003030134         | Richard Weatherly PO Box 21 Mortlake VIC 3272<br>Ph 03 55997276 Fax 0355997227 Email: <a href="mailto:connewarran@tca-online.com.au">connewarran@tca-online.com.au</a>             |
| <b>Goodwood 0056</b><br>5038922003030056             | Richard Alexander Pattisons Lane Glenthompson VIC 3293<br>Ph 03 55778265 Fax 03 55778256 Email: <a href="mailto:goodwoodmerino@datafast.net.au">goodwoodmerino@datafast.net.au</a> |
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| <b>Gringegalgonna ZAC0011/01</b><br>5030972001ZAC011 | Stephen Silcock 279 Melville Forest Vasey Rd Vasey VIC 3407<br>Ph. 03 55743202 Fax 03 55743239 Email: <a href="mailto:sjsilcock@bigpond.com">sjsilcock@bigpond.com</a>             |
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| <b>Kilfeera Park 3.21</b><br>5034252003030021        | Murray & Fiona McKenzie 131 Brock Rd Lurg VIC 3673<br>Ph 03 57666278 Fax 03 57666248 Email: <a href="mailto:kilpark@austarnet.com.au">kilpark@austarnet.com.au</a>                 |
| <b>Kilfeera Park 6.275 *</b><br>5034251996960275     | Murray & Fiona McKenzie 131 Brock Rd Lurg VIC 3673<br>Ph 03 57666278 Fax 03 57666248 Email: <a href="mailto:kilpark@austarnet.com.au">kilpark@austarnet.com.au</a>                 |
| <b>Kurra Wirra BLK38</b><br>50417320030BLK38         | Rob & Bernie Close RMB 9331 Coleraine VIC 3315<br>Ph 03 55704238 Fax 03 55704234 Email: <a href="mailto:kurrawirra@anson.com.au">kurrawirra@anson.com.au</a>                       |
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| <b>Ruby Hills 0188</b><br>5041202000010188           | Andrew Burgess PO Box 134 Walcha NSW 2354<br>Ph 02 67772102 Fax 02 67780009 Email: <a href="mailto:rubyhills@bigpond.com">rubyhills@bigpond.com</a>                                |
| <b>The Grange 201112</b><br>5042082002201112         | Lukis Blake PO Box 95 Dongara WA 6525<br>Ph 08 92961880 Fax 08 92961088 Email: <a href="mailto:lukis@thegrange.biz">lukis@thegrange.biz</a>  |
| <b>The Mountain Dam SN77</b><br>5045721999SN0077     | Tom & Alison Silcock 429 Silcocks Rd Telangatuk East VIC 3401<br>Ph 03 53882238 Fax 03 53882235 Email: <a href="mailto:themountaindam@bigpond.com">themountaindam@bigpond.com</a>  |
| <b>Windarra 010838</b><br>5043382001010838           | Tom Hanson 3 Rutland Ave Unley park SA 5061<br>Ph 08 8271 2656 Fax 08 82722145 Email: <a href="mailto:tomhanson@ozemail.com.au">tomhanson@ozemail.com.au</a>                       |

\* **2005 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 – 2005 drop Progeny – “Arundale”

## **Ewe Base:**

Ewes for the 2005 trial were selected from “Arundale” mixed age, fine wool Merino breeding ewes. The average adult flock micron at “Arundale” is 19.5µ.

## **2005 Progeny Location:**

The “Arundale” property, owned by Donald Cant and managed by Barry Matthews, is located 16 kms west of Balmoral on a predominately sandy, grey loam soil type in undulating red gum country. An extensive pasture improvement program has been implemented at “Arundale”, using rotational and cell grazing strategies along with pasture oversowing and the trialling of lucerne in certain areas. The average rainfall is 650 mm.

## **Stock Management/Seasonal Conditions**

Conditions in early 2005 commenced with 77mm in January and February creating a false start to the Autumn seasonal break. Feed was scarce right throughout the late autumn and early winter period. Good stands of feed were available throughout spring, with 550mm of rain for the year.

Another false break occurred in February 2006 with good rains late June early July giving us hope for the rest of the year, but as we all know that was not to be. Very little for the rest of the year saw reduced growth and bulk in the pastures and hardly any run off into dams. An extensive destocking program and the pumping of water from several spring fed dams helped get us through one of the toughest years on record. The only positive side was the milder temperatures through winter, which has enabled stock to utilize the supplementary feed. Rainfall for 2006 was 320mm.

Again we had early autumn rains with 110mm falling in January and February 2007, with follow up rains in May and July and another mild winter saw the progeny flourish through 2007.

In finishing I would like to thank the Management Committee for all their help the past 3 years; a period that has been most enjoyable and informative.

**Barry Matthews**

## **The Evaluation & Management Program 2005 drop progeny:**

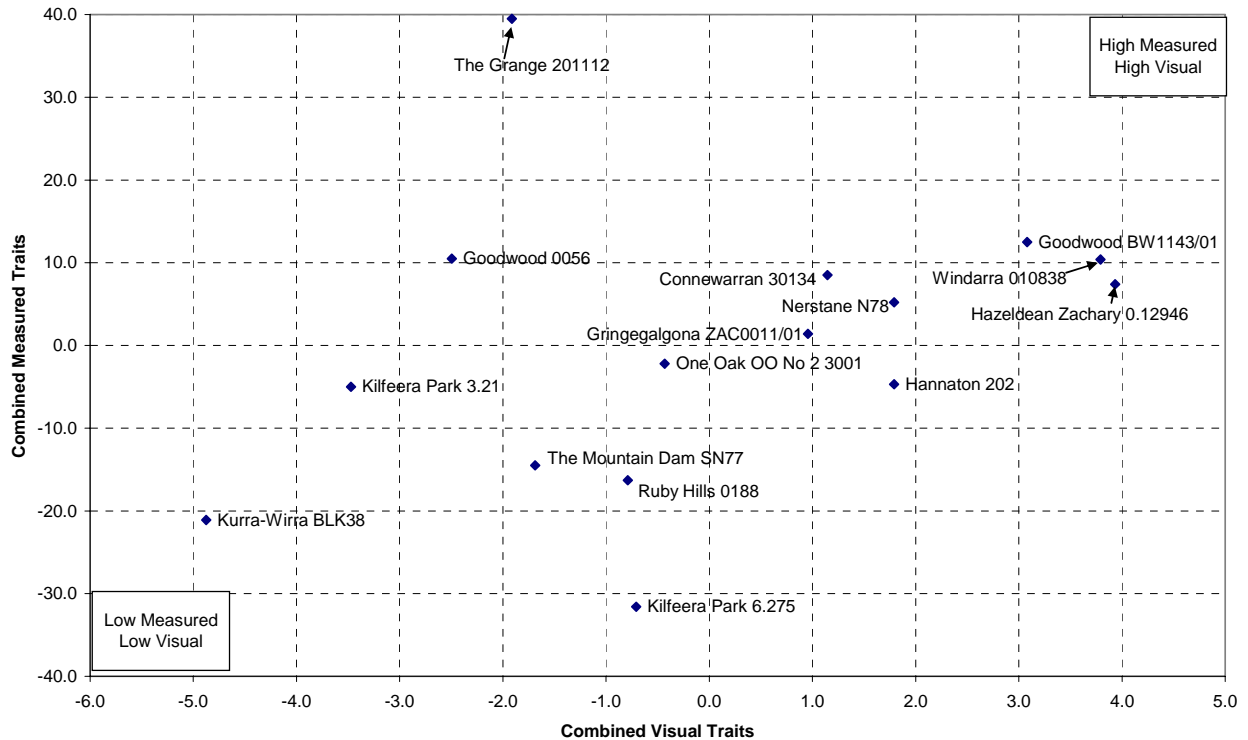
|                                 |  |
|---------------------------------|--|
| 21 <sup>st</sup> February 2005  | Commenced AI program. Ewes sponged and teasers injected  |
| 9 <sup>th</sup> March 2005      | Laparoscopic insemination of 900 ewes, conducted by Brecon Breeders  |
| 9 <sup>th</sup> May 2005        | Ultrasound/scan ewes by Mark Jenkinson   |
| 10 <sup>th</sup> May 2005       | Drafted ewes into groups of singles and twins  |
| 22 <sup>nd</sup> July 2005      | Drenched and vaccinated ewes, drafted into sire groups for lambing   |
| 11 <sup>th</sup> August 2005    | Ewes commenced lambing   |
| 2 <sup>nd</sup> September 2005  | Lambs tagged and scored  |
| 27 <sup>th</sup> September 2005 | Marked and mulesed lambs, vaccinated, scored for tail and breach wrinkle                                       |
| 9 <sup>th</sup> November 2005   | Jetted ewes and lambs for fly protection   |
| 15 <sup>th</sup> December 2005  | Weaned lambs, 2 <sup>nd</sup> vaccination, 1 <sup>st</sup> summer drench, lambs body weighed (weaning weights) |
| 24 <sup>th</sup> February 2006  | 2 <sup>nd</sup> summer drench, crutched  |
| 18 <sup>th</sup> March 2006     | Progeny on display at Balmoral Show  |
| 5 <sup>th</sup> April 2006      | Progeny on display at Open day   |
| 14 <sup>th</sup> June 2006      | Drenched, mid side sampling and 1 <sup>st</sup> visual classing of progeny                                     |
| 11 <sup>th</sup> July 2006      | 1 <sup>st</sup> shearing (11months wool)   |
| 11 <sup>th</sup> August 2006    | Body weighing (yearling weight)  |
| 29 <sup>th</sup> August 2006    | Individual WEC samples collected   |
| 17 <sup>th</sup> March 2007     | Progeny on display at Balmoral Show  |
| 3 <sup>rd</sup> April 2007      | Progeny on display at Open Day and group visual classing by Elliot Lindley                                     |
| 4 <sup>th</sup> July 2007       | 2 <sup>nd</sup> visual classing of progeny and midside samples taken   |
| 17 <sup>th</sup> July 2007      | 2 <sup>nd</sup> shearing (12 months wool, 23 months age)   |
| 3 <sup>rd</sup> August 2007     | Body weighing (adult weight)   |

**Classer for 2005 Drop Progeny : Mr Elliot Lindley, Elders Ltd.**

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

**Figure 1: Summary Graph – Combined Measured Traits and Classer's Grade  
2005 drop – 2nd 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: Goodwood BW1143/01

Tops% = 9.68 %

Culls% = 3.23 %

7% MP Index = 112.50

Average Tops% = 9.95 %

Average Culls% = 18.91 %

$$\text{Combined Visual} = ((9.68 - 3.23)/5) - ((9.95 - 18.91)/5) = (6.45/5) - (-8.96/5) = (1.29) - (-1.79) = 3.08 \%$$

$$\text{Combined Measured} = 112.50 - 100 = 12.50$$

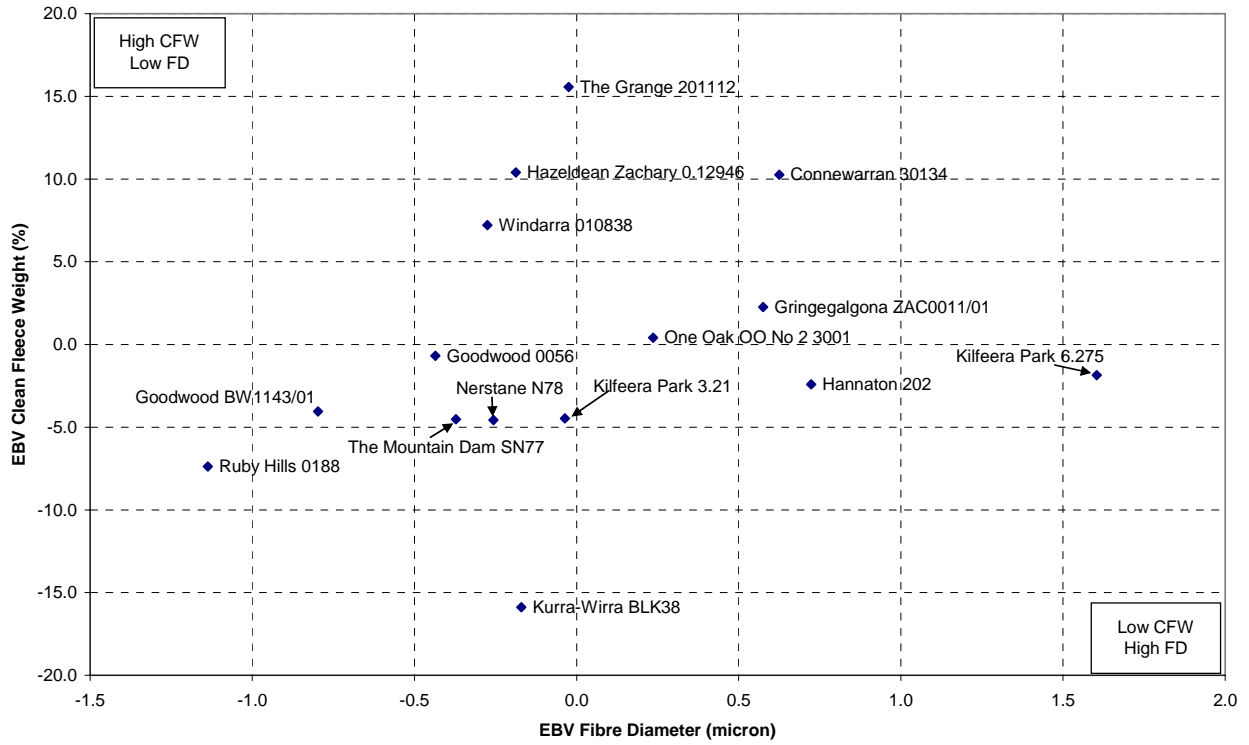
**Table A – MERINOSELECT Index Options and Classer’s Grade  
2005 drop - 2nd Evaluation**

| 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 |                   |          |         |
| Connewarran 30134         | 36            | 110                        | 109   | 105    | 99                | 13                | 71       | 16      |
| Goodwood 0056             | 31            | 108                        | 111   | 111    | 113               | 4                 | 71       | 25      |
| Goodwood BW1143/01 *      | 34            | 105                        | 113   | 118    | 105               | 10                | 87       | 3       |
| Gringegalgonna ZAC0011/01 | 25            | 108                        | 101   | 95     | 99                | 4                 | 88       | 8       |
| Hannaton 202              | 34            | 93                         | 95    | 98     | 94                | 18                | 65       | 18      |
| Hazeldean Zachary 0.12946 | 29            | 111                        | 107   | 103    | 121               | 21                | 68       | 11      |
| Kilfeera Park 3.21        | 19            | 101                        | 95    | 91     | 69                | 5                 | 63       | 32      |
| Kilfeera Park 6.275 *     | 17            | 76                         | 68    | 67     | 76                | 13                | 63       | 25      |
| Kurra-Wirra BLK38         | 32            | 75                         | 79    | 86     | 68                | 9                 | 48       | 42      |
| Nerstane N78              | 21            | 104                        | 105   | 106    | 108               | 14                | 71       | 14      |
| One Oak OO No 2 3001      | 36            | 101                        | 98    | 96     | 90                | 6                 | 78       | 17      |
| Ruby Hills 0188           | 32            | 74                         | 84    | 96     | 98                | 6                 | 74       | 19      |
| The Grange 201112         | 27            | 140                        | 140   | 132    | 136               | 7                 | 67       | 26      |
| The Mountain Dam SN77     | 23            | 85                         | 86    | 89     | 96                | 4                 | 74       | 22      |
| Windarra 010838           | 21            | 110                        | 110   | 109    | 110               | 15                | 80       | 5       |
| Average                   | 28            | 100                        | 100   | 100    | 100               | 10 %              | 71 %     | 19 %    |

\* **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  
2005 drop - 2nd Evaluation



Tables 1 & 2– Measured and scored assessments – 2005 drop – 2nd Evaluation

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

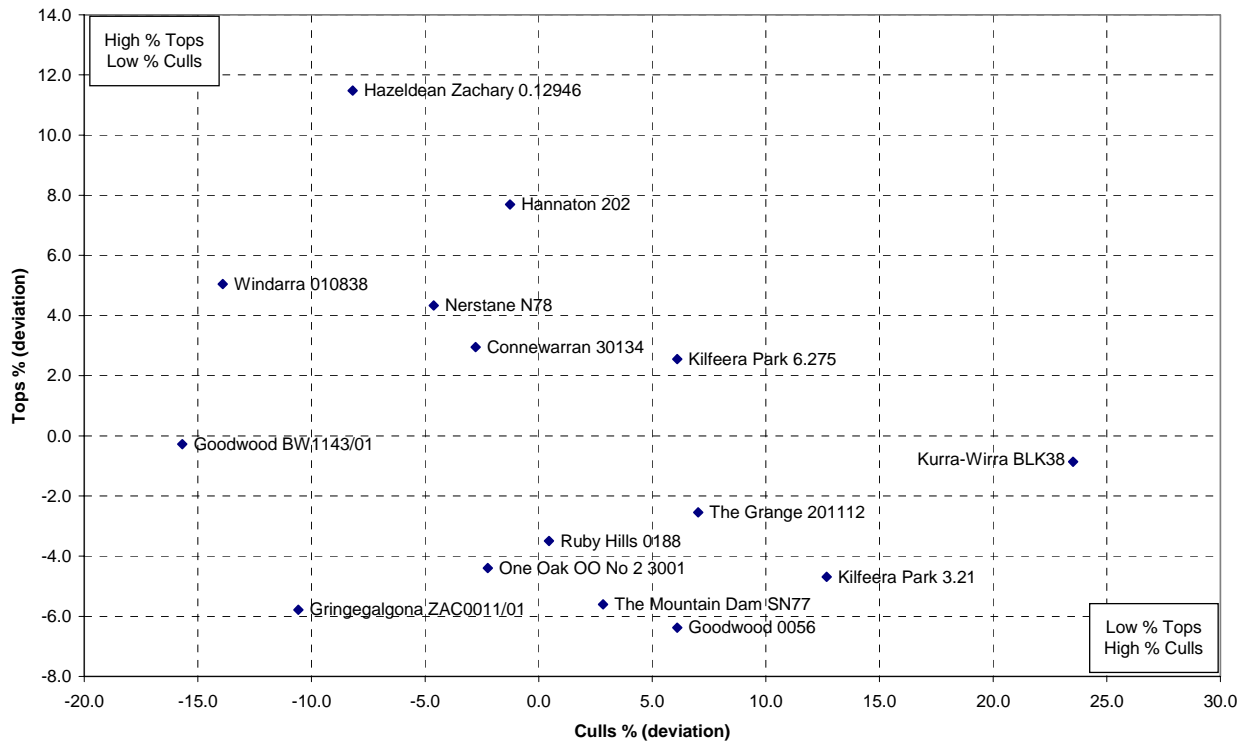
| Sire Identity             | No of progeny | Estimated Breeding Values |        |                 |        |                    |                    |         |         | Classer’s Grade % |          |         |
|---------------------------|---------------|---------------------------|--------|-----------------|--------|--------------------|--------------------|---------|---------|-------------------|----------|---------|
|                           |               | GFW %                     |        | CFW %           |        | FD $\mu\text{m}$   |                    | WT kg   |         | Tops %            | Flocks % | Culls % |
|                           |               | 1st                       | 2nd    | 1 <sup>st</sup> | 2nd    | 1st                | 2nd                | 1st     | 2nd     |                   |          |         |
| Connewarran 30134         | 36            | -2.4                      | 8.9    | 1.7             | 10.3   | 0.6                | 0.6                | -2.0    | 1.8     | 13                | 71       | 16      |
| Goodwood 0056             | 31            | 0.4                       | -5.8   | 7.4             | -0.7   | -0.7               | -0.4               | -3.0    | -1.5    | 4                 | 71       | 25      |
| Goodwood BW1143/01        | 34            | -4.2                      | -5.2   | 2.4             | -4.1   | -0.6               | -0.8               | -1.8    | -0.1    | 10                | 87       | 3       |
| Gringegalgonia ZAC0011/01 | 25            | 10.7                      | 4.4    | 9.6             | 2.3    | 0.6                | 0.6                | 2.5     | 0.3     | 4                 | 88       | 8       |
| Hannaton 202              | 34            | -9.3                      | -3.5   | -7.2            | -2.4   | 0.2                | 0.7                | 3.6     | 2.6     | 18                | 65       | 18      |
| Hazeldean Zachary 0.12946 | 29            | 7.7                       | 13.3   | 1.8             | 10.4   | -0.7               | -0.2               | -3.2    | -0.2    | 21                | 68       | 11      |
| Kilfeera Park 3.21        | 19            | 6.0                       | -4.2   | 4.4             | -4.5   | 0.2                | 0.0                | 5.5     | 0.3     | 5                 | 63       | 32      |
| Kilfeera Park 6.275       | 17            | -9.2                      | -3.4   | -5.7            | -1.9   | 1.9                | 1.6                | -1.3    | -0.5    | 13                | 63       | 25      |
| Kurra-Wirra BLK38         | 32            | -7.2                      | -15.8  | -10.2           | -15.9  | -0.2               | -0.2               | 4.5     | 1.4     | 9                 | 48       | 42      |
| Nerstane N78              | 21            | 12.1                      | -1.9   | 6.4             | -4.6   | -0.4               | -0.3               | -0.8    | -3.1    | 14                | 71       | 14      |
| One Oak OO No 2 3001      | 36            | 3.5                       | 1.4    | 5.0             | 0.4    | 0.3                | 0.2                | -1.2    | 0.1     | 6                 | 78       | 17      |
| Ruby Hills 0188           | 32            | -19.4                     | -8.0   | -19.8           | -7.4   | -0.9               | -1.1               | -3.7    | -1.2    | 6                 | 74       | 19      |
| The Grange 201112         | 27            | 14.3                      | 15.3   | 13.4            | 15.6   | -0.4               | 0.0                | 2.2     | 0.4     | 7                 | 67       | 26      |
| The Mountain Dam SN77     | 23            | -7.6                      | -5.3   | -7.0            | -4.5   | 0.5                | -0.4               | -1.0    | -0.2    | 4                 | 74       | 22      |
| Windarra 010838           | 21            | 4.9                       | 10.2   | -1.8            | 7.2    | -0.4               | -0.3               | -0.3    | 0.1     | 15                | 80       | 5       |
| Average                   | 28            | 2.8 kg                    | 4.5 kg | 2.0 kg          | 3.3 kg | 16.1 $\mu\text{m}$ | 17.1 $\mu\text{m}$ | 28.2 kg | 42.0 kg | 10 %              | 71 %     | 19 %    |

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

|                           |               | Estimated Breeding Values |        |                  |                 |                        |             |                  |         |         |
|---------------------------|---------------|---------------------------|--------|------------------|-----------------|------------------------|-------------|------------------|---------|---------|
|                           |               | CV %                      |        | Curvature deg/mm |                 | Staple Strength N/ktex |             | Staple Length mm |         | WEC %*  |
| Sire Identity             | No of progeny | 1st                       | 2nd    | 1st              | 2 <sup>nd</sup> | 1st                    | 2nd         | 1st              | 2nd     |         |
| Connewarran 30134         | 36            | -1.4                      | -0.7   | -9.8             | -8.7            | 4.0                    | 0.0         | 1.1              | 3.5     | 57.1    |
| Goodwood 0056             | 31            | -0.1                      | 1.0    | -4.0             | -5.0            | 1.2                    | -2.9        | 1.1              | -2.9    | -9.1    |
| Goodwood BW1143/01        | 34            | -1.7                      | -2.0   | -3.3             | -1.3            | 2.0                    | 2.4         | 4.6              | 4.9     | 57.0    |
| Gringegalgonia ZAC0011/01 | 25            | 1.9                       | 1.7    | 6.5              | 6.4             | 0.0                    | 4.5         | 4.2              | 2.8     | -18.1   |
| Hannaton 202              | 34            | -2.4                      | -1.3   | -0.1             | -1.2            | 4.0                    | 3.3         | -3.1             | -0.8    | 8.1     |
| Hazeldean Zachary 0.12946 | 29            | 1.9                       | 1.4    | -2.3             | -3.9            | -4.1                   | -3.5        | 6.1              | 8.9     | -70.2   |
| Kilfeera Park 3.21        | 19            | 1.6                       | 1.3    | 2.4              | 2.4             | -5.5                   | -4.3        | -8.9             | -10.1   | 83.3    |
| Kilfeera Park 6.275       | 17            | 1.2                       | 0.2    | 0.5              | 0.7             | 1.6                    | 2.4         | -5.9             | -8.0    | -40.4   |
| Kurra-Wirra BLK38         | 32            | -0.3                      | 0.2    | -0.9             | 0.5             | -1.2                   | 0.1         | -10.9            | -8.3    | 44.6    |
| Nerstane N78              | 21            | -1.3                      | -2.0   | 5.5              | 4.9             | -4.6                   | -2.4        | 8.9              | 8.9     | -26.8   |
| One Oak OO No 2 3001      | 36            | 1.2                       | 1.0    | -4.3             | -3.2            | 0.3                    | -0.7        | 5.0              | 3.0     | 30.2    |
| Ruby Hills 0188           | 32            | 1.4                       | 0.3    | 9.2              | 9.4             | 2.1                    | 1.0         | -6.0             | -5.4    | -11.1   |
| The Grange 201112         | 27            | -1.2                      | -0.9   | -9.0             | -9.0            | 3.8                    | 1.1         | -3.6             | -3.1    | 8.8     |
| The Mountain Dam SN77     | 23            | -0.3                      | 0.0    | 9.2              | 8.1             | -2.5                   | -1.1        | -4.1             | -3.2    | -35.7   |
| Windarra 010838           | 21            | -0.5                      | -0.4   | 0.2              | -0.4            | -0.8                   | 0.4         | 11.5             | 10.2    | 10.3    |
| Average                   | 28            | 22.0 %                    | 20.4 % | 86.6 deg/mm      | 85.8 deg/mm     | 32.0 N/ktex            | 33.2 N/ktex | 66.6 mm          | 85.6 mm | 543 epg |

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

Figure 3 - Summary Graph Classer's Grades - 2005 drop - 2nd Evaluation



**Tables 3 – Measured traits – 2005 drop – 2nd 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         |
|---------------------------|---------------|-----------|-----------|------------|------------|-----------|----------------|----------------|------------|
| Connewarran 30134         | 36            | 4.8       | 3.6       | 17.5       | 42.7       | 20.3      | 81.1           | 32.6           | 88.0       |
| Goodwood 0056             | 31            | 4.4       | 3.3       | 16.9       | 41.4       | 21.4      | 81.5           | 30.7           | 84.2       |
| Goodwood BW1143/01        | 34            | 4.4       | 3.2       | 16.7       | 41.2       | 19.6      | 84.8           | 34.2           | 88.9       |
| Gringegalgonia ZAC0011/01 | 25            | 4.6       | 3.3       | 17.4       | 41.4       | 22.0      | 90.6           | 35.2           | 87.6       |
| Hannaton 202              | 34            | 4.5       | 3.3       | 17.5       | 42.1       | 20.2      | 85.5           | 34.6           | 85.0       |
| Hazeldean Zachary 0.12946 | 29            | 4.9       | 3.5       | 17.0       | 41.0       | 21.6      | 83.5           | 29.9           | 90.6       |
| Kilfeera Park 3.21        | 19            | 4.5       | 3.2       | 17.0       | 41.2       | 21.8      | 87.2           | 28.8           | 79.5       |
| Kilfeera Park 6.275       | 17            | 4.3       | 3.2       | 17.9       | 40.8       | 20.4      | 84.8           | 34.1           | 79.6       |
| Kurra-Wirra BLK38         | 32            | 4.1       | 3.0       | 17.0       | 41.8       | 21.0      | 86.9           | 32.8           | 81.9       |
| Nerstane N78              | 21            | 4.5       | 3.1       | 16.8       | 39.0       | 19.5      | 88.2           | 29.5           | 92.2       |
| One Oak OO No 2 3001      | 36            | 4.6       | 3.3       | 17.2       | 41.4       | 21.4      | 83.5           | 31.9           | 87.5       |
| Ruby Hills 0188           | 32            | 4.2       | 3.1       | 16.5       | 40.0       | 20.8      | 89.9           | 32.6           | 81.7       |
| The Grange 201112         | 27            | 5.0       | 3.7       | 17.1       | 41.1       | 20.0      | 80.9           | 32.7           | 84.0       |
| The Mountain Dam SN77     | 23            | 4.3       | 3.2       | 16.7       | 41.2       | 20.9      | 90.5           | 32.1           | 84.5       |
| Windarra 010838           | 21            | 4.9       | 3.5       | 17.0       | 41.4       | 21.0      | 85.9           | 32.2           | 91.9       |
| Average                   | 28            | 4.5<br>kg | 3.3<br>kg | 17.1<br>µm | 42.0<br>kg | 20.4<br>% | 85.8<br>deg/mm | 33.2<br>N/ktex | 85.6<br>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 |
|---------------------------|---------------|-----------|------------|-----------|----------------|
| Connewarran 30134         | 36            | 74.7      | 16.9       | 3.5       | 99.8           |
| Goodwood 0056             | 31            | 76.0      | 16.5       | 3.6       | 99.7           |
| Goodwood BW1143/01        | 34            | 73.3      | 16.0       | 3.3       | 99.8           |
| Gringegalgonia ZAC0011/01 | 25            | 71.6      | 17.1       | 3.8       | 99.6           |
| Hannaton 202              | 34            | 73.2      | 17.0       | 3.5       | 99.7           |
| Hazeldean Zachary 0.12946 | 29            | 71.3      | 16.6       | 3.7       | 99.8           |
| Kilfeera Park 3.21        | 19            | 71.4      | 16.7       | 3.7       | 99.7           |
| Kilfeera Park 6.275       | 17            | 75.1      | 17.3       | 3.6       | 99.6           |
| Kurra-Wirra BLK38         | 32            | 71.9      | 16.5       | 3.6       | 99.8           |
| Nerstane N78              | 21            | 70.1      | 16.2       | 3.3       | 99.9           |
| One Oak OO No 2 3001      | 36            | 71.9      | 16.8       | 3.7       | 99.6           |
| Ruby Hills 0188           | 32            | 73.2      | 16.0       | 3.4       | 99.8           |
| The Grange 201112         | 27            | 73.8      | 16.6       | 3.4       | 99.8           |
| The Mountain Dam SN77     | 23            | 73.2      | 16.3       | 3.5       | 99.9           |
| Windarra 010838           | 21            | 70.6      | 16.6       | 3.6       | 99.8           |
| Average                   | 28            | 72.8<br>% | 16.5<br>µm | 3.5<br>µm | 99.8<br>%      |

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

**Table 4. Classer's Assessment – 2005 drop – 2nd 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 |    |   |      |     |    |    |   |   |   |
|---------------------------|--------|---|----|----|----|-----------|-----|---|----|----|-------------------|---|-----|---|----|------------|----|---|------|-----|----|----|---|---|---|
|                           | 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 |
| Sire Identity             |        |   |    |    |    |           |     |   |    |    |                   |   |     |   |    |            |    |   |      |     |    |    |   |   |   |
| Connewarran 30134         | 3.0    |   | 16 | 65 | 19 |           | 3.0 |   | 10 | 84 | 3                 | 3 | 3.1 |   | 23 | 48         | 29 |   | 0.03 | 97  |    | 3  |   |   |   |
| Goodwood 0056             | 3.0    |   | 14 | 71 | 14 |           | 3.0 |   | 11 | 79 | 11                |   | 3.1 |   | 7  | 71         | 21 |   | 0.04 | 96  |    | 4  |   |   |   |
| Goodwood BW1143/01        | 3.0    |   | 23 | 52 | 26 |           | 2.9 |   | 26 | 58 | 16                |   | 3.2 |   | 10 | 58         | 32 |   | 0.00 | 100 |    |    |   |   |   |
| Gringegalgonia ZAC0011/01 | 3.5    |   | 8  | 42 | 46 | 4         | 3.3 |   |    | 67 | 33                |   | 3.1 |   | 13 | 67         | 21 |   | 0.13 | 96  |    |    | 4 |   |   |
| Hannaton 202              | 2.9    |   | 32 | 50 | 15 | 3         | 2.5 |   | 53 | 41 | 6                 |   | 3.2 |   | 15 | 50         | 35 |   | 0.06 | 97  |    | 3  |   |   |   |
| Hazeldean Zachary 0.12946 | 3.0    |   | 25 | 50 | 25 |           | 2.9 |   | 21 | 68 | 11                |   | 3.4 |   | 14 | 32         | 50 | 4 | 0.04 | 96  |    | 4  |   |   |   |
| Kilfeera Park 3.21        | 3.5    | 5 | 5  | 26 | 63 |           | 3.2 | 5 | 5  | 53 | 37                |   | 3.2 |   | 26 | 32         | 42 |   | 0.00 | 100 |    |    |   |   |   |
| Kilfeera Park 6.275       | 3.0    |   | 31 | 38 | 31 |           | 3.2 |   | 19 | 44 | 38                |   | 2.9 |   | 25 | 56         | 19 |   | 0.25 | 75  |    | 25 |   |   |   |
| Kurra-Wirra BLK38         | 3.1    | 3 | 21 | 39 | 33 | 3         | 2.9 | 6 | 21 | 55 | 15                | 3 | 3.2 | 3 | 9  | 58         | 30 |   | 0.09 | 91  |    | 9  |   |   |   |
| Nerstane N78              | 2.7    |   | 43 | 48 | 10 |           | 2.5 |   | 48 | 52 |                   |   | 3.5 |   |    | 52         | 48 |   | 0.05 | 95  |    | 5  |   |   |   |
| One Oak OO No 2 3001      | 3.4    |   | 8  | 47 | 44 |           | 3.1 |   | 17 | 64 | 17                | 3 | 3.1 |   | 14 | 64         | 22 |   | 0.22 | 92  | 3  | 3  |   |   | 3 |
| Ruby Hills 0188           | 2.8    |   | 35 | 45 | 19 |           | 2.9 |   | 23 | 65 | 13                |   | 3.0 |   | 26 | 45         | 29 |   | 0.00 | 100 |    |    |   |   |   |
| The Grange 201112         | 3.6    |   | 4  | 37 | 59 |           | 3.2 |   | 15 | 52 | 30                | 4 | 3.5 |   | 7  | 37         | 56 |   | 0.37 | 67  | 30 | 4  |   |   |   |
| The Mountain Dam SN77     | 3.1    |   | 26 | 35 | 39 |           | 2.7 |   | 35 | 57 | 9                 |   | 3.1 |   | 9  | 70         | 22 |   | 0.09 | 91  |    | 9  |   |   |   |
| Windarra 010838           | 3.0    | 5 | 25 | 35 | 35 |           | 2.8 | 5 | 25 | 60 | 10                |   | 3.5 |   |    | 50         | 50 |   | 0.00 | 100 |    |    |   |   |   |
| Average                   | 3.1    | 1 | 21 | 47 | 31 | 1         | 2.9 | 1 | 22 | 60 | 15                | 1 | 3.2 |   | 13 | 53         | 33 |   | 0.09 | 93  | 5  | 1  |   |   |   |

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

| Sire Identity             | 60 | 64 | 66 | 70 | 74 | 80 | MF4E | MF5E |
|---------------------------|----|----|----|----|----|----|------|------|
| Connewarran 30134         | 3  | 48 | 45 | 3  |    |    | 100  |      |
| Goodwood 0056             |    | 39 | 54 | 7  |    |    | 100  |      |
| Goodwood BW1143/01        |    | 1  | 84 | 6  |    |    | 100  |      |
| Gringegalgonia ZAC0011/01 |    | 4  | 67 | 29 |    |    | 96   | 4    |
| Hannaton 202              |    | 21 | 71 | 9  |    |    | 100  |      |
| Hazeldean Zachary 0.12946 |    | 18 | 79 | 4  |    |    | 100  |      |
| Kilfeera Park 3.21        |    | 21 | 58 | 21 |    |    | 100  |      |
| Kilfeera Park 6.275       |    | 25 | 63 | 13 |    |    | 100  |      |
| Kurra-Wirra BLK38         |    | 3  | 64 | 33 |    |    | 100  |      |
| Nerstane N78              |    | 5  | 57 | 33 | 5  |    | 100  |      |
| One Oak OO No 2 3001      | 3  | 22 | 67 | 8  |    |    | 97   | 3    |
| Ruby Hills 0188           |    | 3  | 39 | 45 | 13 |    | 100  |      |
| The Grange 201112         |    | 41 | 59 |    |    |    | 96   | 4    |
| The Mountain Dam SN77     |    |    | 48 | 48 | 4  |    | 96   | 4    |
| Windarra 010838           |    | 15 | 65 | 2  |    |    | 100  |      |
| Average                   |    | 19 | 61 | 18 | 1  |    | 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 /<br>Shoulder |   |                  |                  |
|------------------------------|----------------|---|----|----|----|-------------------------|-----|---|----|----|-------------|---|-----|---|----|-----|--------------------|---|------------------|------------------|
|                              | Avg            | 1 | 2  | 3  | 4  | 5                       | Avg | 1 | 2  | 3  | 4           | 5 | Avg | 1 | 2  | 3   | 4                  | 5 |                  |                  |
|                              | * 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> |
| Connewarran 30134            | 3.1            |   | 10 | 71 | 19 |                         | 2.8 |   | 32 | 52 | 16          |   | 3.6 |   | 42 | 58  |                    |   |                  | 16               |
| Goodwood 0056                | 3.3            |   |    | 71 | 29 |                         | 2.6 | 7 | 29 | 57 | 7           |   | 3.5 |   | 54 | 46  |                    | 4 |                  | 18               |
| Goodwood<br>BW1143/01        | 2.8            |   | 29 | 58 | 13 |                         | 2.5 |   | 48 | 48 | 3           |   | 3.3 |   | 68 | 32  |                    |   |                  | 23               |
| Gringegalgona<br>ZAC0011/01  | 3.2            |   | 4  | 71 | 25 |                         | 3.1 |   | 8  | 75 | 17          |   | 3.3 |   | 67 | 33  |                    |   |                  | 4                |
| Hannaton 202                 | 3.1            |   | 12 | 71 | 18 |                         | 2.7 |   | 38 | 56 | 6           |   | 3.6 |   | 44 | 53  | 3                  |   |                  | 15               |
| Hazeldean Zachary<br>0.12946 | 3.2            |   | 11 | 61 | 29 |                         | 2.9 |   | 21 | 68 | 11          |   | 3.3 |   | 71 | 29  |                    |   |                  | 18               |
| Kilfeera Park 3.21           | 3.4            |   |    | 63 | 32 | 5                       | 2.6 |   | 37 | 63 |             |   | 3.4 |   | 63 | 37  |                    |   |                  | 5                |
| Kilfeera Park 6.275          | 3.0            |   | 13 | 75 | 13 |                         | 2.6 | 6 | 31 | 63 |             |   | 3.4 |   | 6  | 44  | 50                 |   |                  | 25               |
| Kurra-Wirra BLK38            | 3.5            |   | 9  | 36 | 55 |                         | 2.5 |   | 55 | 42 | 3           |   | 3.1 | 3 | 82 | 15  |                    |   |                  | 33               |
| Nerstane N78                 | 2.9            |   | 24 | 62 | 14 |                         | 2.4 |   | 57 | 43 |             |   | 3.5 |   | 48 | 52  |                    |   |                  | 29               |
| One Oak OO No 2<br>3001      | 3.1            |   | 11 | 69 | 19 |                         | 2.8 |   | 25 | 69 | 6           |   | 3.3 |   | 69 | 28  | 3                  |   |                  | 19               |
| Ruby Hills 0188              | 3.1            |   | 16 | 61 | 23 |                         | 2.9 | 3 | 16 | 65 | 16          |   | 3.6 |   | 45 | 52  | 3                  | 3 |                  | 10               |
| The Grange 201112            | 2.9            |   | 30 | 52 | 15 | 4                       | 2.7 | 4 | 26 | 63 | 7           |   | 3.4 |   | 59 | 41  |                    |   |                  | 30               |
| The Mountain Dam<br>SN77     | 3.3            |   | 4  | 57 | 39 |                         | 2.7 |   | 35 | 57 | 9           |   | 3.5 |   | 52 | 48  |                    |   |                  | 17               |
| Windarra 010838              | 3.2            |   | 5  | 70 | 25 |                         | 2.9 |   | 25 | 60 | 15          |   | 3.5 |   | 50 | 50  |                    |   |                  | 25               |
| Average                      | 3.1            |   | 12 | 63 | 25 |                         | 2.7 | 1 | 32 | 58 | 8           |   | 3.4 |   | 58 | 41  | 1                  |   |                  | 19               |

\* 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<br>Lamb*   | Wool             | Skin             |
|---------------------------|------------------|------------------|------------------|
| Sire Identity             | Neg <sup>1</sup> | Neg <sup>1</sup> | Neg <sup>1</sup> |
| Connewarran 30134         |                  | 6                | 39               |
| Goodwood 0056             |                  | 3                | 48               |
| Goodwood BW1143/01        |                  |                  | 6                |
| Gringegalgona ZAC0011/01  |                  | 8                | 58               |
| Hannaton 202              |                  |                  | 20               |
| Hazeldean Zachary 0.12946 |                  |                  | 63               |
| Kilfeera Park 3.21        |                  |                  | 50               |
| Kilfeera Park 6.275       |                  |                  | 42               |
| Kurra-Wirra BLK38         |                  |                  | 30               |
| Nerstane N78              |                  |                  | 41               |
| One Oak OO No 2 3001      |                  | 5                | 44               |
| Ruby Hills 0188           |                  | 3                | 21               |
| The Grange 201112         |                  | 3                | 45               |
| The Mountain Dam SN77     |                  |                  | 24               |
| Windarra 010838           |                  | 4                | 56               |
| Average                   |                  | 2                | 38               |

\* No black lambs recorded

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

**Table 4e. Breech Scoring**

| Sire Identity             | Tail Breech Wrinkle |    |    |    |    | Bare Area |     |    |    |    | Body Wrinkle |   |     |   |    | Tail Length |    |    |     |    |    |    |    |
|---------------------------|---------------------|----|----|----|----|-----------|-----|----|----|----|--------------|---|-----|---|----|-------------|----|----|-----|----|----|----|----|
|                           | Avg                 | 1  | 2  | 3  | 4  | 5         | Avg | 1  | 2  | 3  | 4            | 5 | Avg | 1 | 2  | 3           | 4  | 5  | Avg | 1  | 2  | 3  | 4  |
| Connewarran 30134         | 2.0                 | 39 | 33 | 22 | 3  | 3         | 3.1 | 11 | 72 | 17 |              |   | 2.9 | 3 | 34 | 46          | 9  | 9  | 1.7 | 33 | 64 | 3  |    |
| Goodwood 0056             | 1.6                 | 48 | 45 | 6  |    |           | 3.0 | 16 | 71 | 13 |              |   | 2.6 | 3 | 42 | 45          | 10 |    | 1.9 | 19 | 74 | 3  | 3  |
| Goodwood BW1143/01        | 1.9                 | 18 | 74 | 9  |    |           | 3.1 | 3  | 85 | 12 |              |   | 3.1 |   | 24 | 50          | 18 | 9  | 2.0 | 21 | 65 | 9  | 6  |
| Gringegalgona ZAC0011/01  | 2.5                 | 20 | 32 | 28 | 16 | 4         | 3.0 |    | 96 | 4  |              |   | 3.6 | 4 | 12 | 28          | 36 | 20 | 1.8 | 24 | 72 | 4  |    |
| Hannaton 202              | 1.9                 | 26 | 60 | 14 |    |           | 3.0 | 6  | 86 | 9  |              |   | 2.9 |   | 31 | 46          | 20 | 3  | 1.7 | 34 | 60 | 3  | 3  |
| Hazeldean Zachary 0.12946 | 2.0                 | 39 | 32 | 23 | 3  | 3         | 2.9 | 13 | 84 | 3  |              |   | 3.4 |   | 10 | 52          | 26 | 13 | 1.9 | 16 | 77 | 3  | 3  |
| Kilfeera Park 3.21        | 2.1                 | 30 | 45 | 15 | 5  | 5         | 2.9 | 15 | 85 |    |              |   | 3.4 |   | 25 | 30          | 30 | 15 | 2.1 | 10 | 80 | 5  | 5  |
| Kilfeera Park 6.275       | 1.9                 | 32 | 47 | 16 | 5  |           | 3.1 | 11 | 68 | 21 |              |   | 3.0 |   | 32 | 37          | 32 |    | 1.8 | 32 | 63 |    | 5  |
| Kurra-Wirra BLK38         | 2.8                 | 11 | 24 | 41 | 19 | 5         | 3.1 | 8  | 73 | 19 |              |   | 3.7 | 3 | 11 | 24          | 41 | 22 | 1.9 | 11 | 86 | 3  |    |
| Nerstane N78              | 1.8                 | 45 | 32 | 23 |    |           | 3.1 |    | 86 | 14 |              |   | 2.6 |   | 36 | 64          |    |    | 2.2 | 18 | 55 | 14 | 14 |
| One Oak OO No 2 3001      | 2.4                 | 16 | 49 | 22 | 11 | 3         | 2.9 | 11 | 87 | 3  |              |   | 3.2 | 3 | 16 | 53          | 16 | 13 | 2.4 | 3  | 65 | 27 | 5  |
| Ruby Hills 0188           | 2.2                 | 31 | 41 | 13 | 6  | 9         | 3.3 |    | 75 | 25 |              |   | 2.8 | 9 | 47 | 19          | 6  | 19 | 1.8 | 22 | 78 |    |    |
| The Grange 201112         | 2.4                 | 19 | 37 | 33 | 11 |           | 3.0 | 7  | 89 | 4  |              |   | 3.5 |   | 19 | 31          | 31 | 19 | 2.0 | 11 | 78 | 11 |    |
| The Mountain Dam SN77     | 2.4                 | 16 | 32 | 48 |    | 4         | 2.8 | 20 | 76 | 4  |              |   | 3.5 | 8 | 12 | 24          | 36 | 20 | 2.0 | 12 | 84 |    | 4  |
| Windarra 010838           | 1.6                 | 52 | 35 | 13 |    |           | 3.0 | 4  | 91 | 4  |              |   | 2.5 |   | 65 | 22          | 13 |    | 2.0 | 17 | 70 | 9  | 4  |
| Average                   | 2.1                 | 29 | 42 | 22 | 6  | 3         | 3.0 | 8  | 81 | 10 |              |   | 3.1 | 2 | 27 | 39          | 21 | 11 | 1.9 | 19 | 71 | 6  | 3  |

**Definition of Breech Scores**

|                     |       |                         |                   |
|---------------------|-------|-------------------------|-------------------|
| Tail Breech Wrinkle | 1 - 5 | 1 = plain               | 5 = heavy wrinkle |
| Bare Area           | 1 - 5 | 1 = woolly              | 5 = bare          |
| Body Wrinkle        | 1 - 5 | 1 = plain               | 5 = heavy wrinkle |
| Tail Length         | 1 - 4 | 1 = short               |                   |
|                     |       | 2 = normal length       |                   |
|                     |       | 3 = very long           |                   |
|                     |       | 4 = abnormal eg. chewed |                   |

**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    |
| Connewarran 30134         | MF4     | 3.45                                       | 17.4 | 74.7             | 1  | 87 | 33     | 1297            | \$44.79      |
| Goodwood 0056             | MF4     | 3.27                                       | 16.8 | 76.0             | 1  | 84 | 32     | 1343            | \$43.97      |
| Goodwood BW1143/01        | MF4     | 3.22                                       | 16.7 | 73.3             | 1  | 88 | 34     | 1381            | \$44.45      |
| Gringegalgonia ZAC0011/01 | MF4     | 3.32                                       | 17.4 | 71.6             | 1  | 87 | 35     | 1315            | \$43.69      |
| Hannaton 202              | MF4     | 3.25                                       | 17.4 | 73.2             | 1  | 85 | 35     | 1314            | \$42.65      |
| Hazeldean Zachary 0.12946 | MF4     | 3.46                                       | 17.0 | 71.3             | 1  | 90 | 31     | 1315            | \$45.45      |
| Kilfeera Park 3.21        | MF4     | 3.21                                       | 17.0 | 71.4             | 1  | 81 | 31     | 1312            | \$42.14      |
| Kilfeera Park 6.275       | MF4     | 3.25                                       | 17.9 | 75.1             | 1  | 82 | 34     | 1258            | \$40.94      |
| Kurra-Wirra BLK38         | MF4     | 3.02                                       | 17.0 | 71.9             | 1  | 81 | 33     | 1333            | \$40.31      |
| Nerstane N78              | MF4     | 3.21                                       | 16.9 | 70.1             | 1  | 90 | 32     | 1335            | \$42.85      |
| One Oak OO No 2 3001      | MF4     | 3.29                                       | 17.2 | 71.9             | 1  | 87 | 33     | 1316            | \$43.32      |
| Ruby Hills 0188           | MF4     | 3.16                                       | 16.5 | 73.2             | 1  | 83 | 34     | 1402            | \$44.36      |
| The Grange 201112         | MF4     | 3.54                                       | 17.1 | 73.8             | 1  | 84 | 34     | 1335            | \$47.27      |
| The Mountain Dam SN77     | MF4     | 3.21                                       | 16.9 | 73.2             | 1  | 84 | 33     | 1345            | \$43.18      |
| Windarra 010838           | MF4     | 3.40                                       | 16.9 | 70.6             | 1  | 91 | 33     | 1346            | \$45.81      |

<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 =  $3.29 \times (1 + (\text{EBV}_{\text{CFW}}/200))$

<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.

**Table 6. Progeny Group Classing**

The classer, Mr Elliot Lindley, visually assessed each sire group. Evenness of each group was scored from 1 (most even) to 5 (highly variable). General comments were also noted by the classer on each progeny group. The classer did not know the identity of the sire of each group at the time of classing.

| Sire Name                  | Percentage tagged as |       | Score for Evenness | Comments on Evenness & General Comments  |
|----------------------------|----------------------|-------|--------------------|--|
|                            | Singles              | Twins |                    |  |
| Connewarran 30134          | 44%                  | 56%   | 3                  | Uneven for size. Wool type ranges 70s to 60s. Some feet problems.  |
| Goodwood 0056              | 58%                  | 42%   | 2                  | Wool type even. Conformation quite good with one exception. Feet good, & also good legs.   |
| <b>Goodwood BW1143/01</b>  | 65%                  | 35%   | 1                  | Even size. Size is good. Look to be fairly productive. Wool type even - mostly 70s to 64s. Good feet & conformation.   |
| Gringegalgonia ZAC0011/01  | 46%                  | 54%   | 2                  | Very even for size. Good feet. Good conformation. Even for wool type.  |
| Hannaton 202               | 37%                  | 63%   | 1                  | Overall size even, given percentage twins. A few smaller ones. Wool type fairly even, with good nourishment. Very few feet problems - generally good feet. Good depth of body.   |
| Hazeldean Zachary 0.12946  | 47%                  | 53%   | 2.5                | Fairly even for size. Some conformation faults, eg, shoulders. Some sheep showing hockiness. Small number of muffled faces. Wool type fairly even. Look to be fairly productive. |
| Kilfeera Park 3.21         | 60%                  | 40%   | 3                  | Some conformation faults, eg, bad shoulders. Look fairly productive. Wool type fairly even. A few muffled faces.   |
| <b>Kilfeera Park 6.275</b> | 47%                  | 53%   | 3                  | Some shoulder problems. Wool type even. Some variation in length of staple.  |
| Kurra-Wirra BLK38          | 54%                  | 46%   | 2                  | Good size. Some with muffled faces. Generally good feet & good conformation. Even for wool type. Look to be productive.  |
| Nerstane N78               | 50%                  | 50%   | 2.5                | Good conformation & depth of body. Even for wool. Appear productive.   |
| One Oak OO No 2 3001       | 41%                  | 59%   | 3                  | A bit uneven in size. Wool type ranges from 74s to 60s. Conformation quite good. One sheep with shoulder problem.  |
| Ruby Hills 0188            | 55%                  | 45%   | 3                  | Some shoulder, feet and other conformation problems. Wool type even. Some range in size. Some sheep very productive, others not.   |
| The Grange 201112          | 55%                  | 45%   | 3                  | Uneven in size. Some shoulder problems & some feet problems. Variation in wool type from 74s to 60s.   |
| The Mountain Dam SN77      | 36%                  | 64%   | 3                  | Fairly even size, although tend to be smaller sheep (probably due to percentage twins). Even visual wool type. Small amount of conformation fault, eg, hockiness.                |
| Windarra 010838            | 56%                  | 44%   | 2.5                | A few sheep not up to standard, but also some outstanding sheep. Wool type even. Feet good. Conformation good. Look to be productive.  |
|                            | 50%                  | 50%   |                    |  |

