

# final report

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## **To expand the range of traits currently recorded in the benchmarking activities of Merino Central Test Sire Evaluation (STSE) and Merino Bloodline Evaluation**

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### 1. Introduction

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In October 2006 the three previous contracts relating to Merino Superior Sires (EC566, EC20 and EC682) were terminated and replaced with WP135 Merino Superior Sires – Innovation, Administration and Publication.

This milestone report is the third report under the revised contract. The aim of the report is to provide a detailed review of the activities undertaken in respect to the contract in the previous eight months.

### 2. Executive Summary

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The period between July 2007 and April 2008 has been another active period for AMSEA, putting into action a number of major initiatives that were agreed upon during the previous year.

The major activity undertaken was the publishing and distribution of over 3000 copies of Merino Superior Sires 13. The publication is the direct result of several thousand new records being added to the Merino Superior Sires database that now includes progeny records on over 1,100 sires.

A significant change to the publication of Merino Superior Sires has been agreed upon, with future editions to be published in October of each year. This will commence with Merino Superior Sires 14 that will be published in October 2008.

Discussion continues in relation to the merits of publishing ASBVs in Merino Superior Sires. ASBVs were included in Merino Superior Sires for the second year in 2008. The Executive Committee will meet to consider the inclusion of ASBVs in future editions in June 2008.

Longreach and Trangie have joined sire evaluation in 2008, giving a total of 10 active sites. Also new in 2008 is the commencement of a Young Sire Program and the adoption of the Visual Sheep Scores booklet as AMSEA visual trait standards. It is hoped by working closely with the Sheep Genetics Technical Committee that Visual Trait Breeding Values will be available in future editions of Merino Superior Sires.

#### 4. Major activities undertaken

The following major activities have been undertaken over the period July 2007 to April 2008.

##### 4.1 Publication and Distribution of Merino Superior Sires 12

Merino Superior Sires 13 was published and distributed in April 2008. The Merino Superior Sires web site ([www.merinosuperiorsires.com.au](http://www.merinosuperiorsires.com.au)) has been updated as new results from MERINOSELECT analyses have become available.

The new data added to the analysis since Merino Superior Sires 12 is summarised in Tables 2 and 3.

While the New England 2006 drop have been added to the database, the records have not been transferred to Sheep Genetics and the sires have not been reported in MSS13 due to an ongoing data integrity issue currently being investigated.

**Table 2:** Progeny recorded by trait on 2005 drop sire evaluation animals. All measurements recorded at the adult stage.

	gfw	cfw	fd	fdcv	curv	ss	sl	wt
Elders Victoria	388	388	402	402	402	402	402	401
North East Victoria	269	269	269	269	269	268	268	269
South West Slopes	522	515	519	519	519	519	519	517

**Table 3:** progeny recorded by trait on 2006 drop sire evaluation animals. Rows highlighted with italic text refer to hogget measurements while those in plain text refer to yearling measurements.

	gfw	cfw	fd	fdcv	curv	ss	sl	bw	wec
<i>Badgingarra (WA)</i>	<i>236</i>	<i>235</i>	<i>240</i>	<i>240</i>	<i>240</i>	<i>240</i>	<i>240</i>	<i>236</i>	<i>235</i>
Elders Victoria	535	535	536	536	536	536	536	526	496
New England	451	451	452	452	452	448	448	452	439
North East Victoria	454	444	448	448	448	447	447	455	
<i>Yardstick</i>	<i>541</i>	<i>540</i>	<i>550</i>	<i>550</i>	<i>550</i>	<i>543</i>	<i>550</i>	<i>522</i>	<i>508</i>

The sires entered at sire evaluation sites for the 2006 drop are shown in Table 4.

**Table 4:** Sires entered for the 2006 drop

Sire	Site	Pub. Status
Cressbrook, 03.680	New England	in
Havilah North, 03.0121	New England	in
Karalta, P716	New England	in
Karori, K325	New England	in
Longford Poll, Legend	New England	in
Mirani, 546.2	New England	in
Nerstane, 030933	New England	in
Nerstane, 990043	New England	in
Ruby Hills, 3636	New England	in
Ruby Hills, RH7099	New England	in
T13, 03A3012	New England	in

Teangi, TE2026	New England	in
Walcha Ram Breeders Group, 990075	New England	in
Waverley Downs, SMG01	New England	in
Yalgoo, 020487	New England	in
Yalgoo, 420	New England	in
Ag WA Baseflock, 20002058	Yardstick	in
Billandri, 010564	Yardstick	in
Boolading Blue Poll, Orange 1249	Yardstick	in
Cathair Donall, John	Yardstick	in
Centre Plus Poll, 107351	Yardstick	in
Coromandel Poll, 1-69	Yardstick	in
Hazeldean, 1.10014	Yardstick	in
Kooranooking Park, 021473	Yardstick	in
Majuba, GN 415	Yardstick	in
Merinotech WA Poll, 011218	Yardstick	in
Misty Hills, Y99	Yardstick	in
Nerstane, 020409	Yardstick	in
Rylington Merino, 00.699	Yardstick	in
Sunny Valley, 3-91	Yardstick	in
Avington Poll, 03-086	Elders Victoria	in
Bindawarra, 400	Elders Victoria	in
Goodwood, BW1143/01	Elders Victoria	in
Hazeldean, 1.10014	Elders Victoria	in
Hyfield Poll, 3723	Elders Victoria	in
Kerrsville Poll, SY21108	Elders Victoria	in
Melrose, Little Ted	Elders Victoria	in
Merinotech VIC, 041629	Elders Victoria	in
Pastora Poll, Black 800	Elders Victoria	in
Pleasant Park, HS 123	Elders Victoria	withdrawn
The Mountain Dam, Fire-buster	Elders Victoria	in
Toland Poll, Yellow 1474	Elders Victoria	in
Tuloona, Fine Fella	Elders Victoria	in
Windarra, 04-0236	Elders Victoria	in
Avington, 03-260	North East Victoria	in
Cahirblonig, 4069	North East Victoria	in
Eilan Donan, 123 (Floyd)	North East Victoria	withdrawn
Kilfeera Park, 1.444	North East Victoria	in
Kilfeera Park, 3.161	North East Victoria	in
Koole Vale Poll, B249	North East Victoria	in
Merinotech VIC, 021530	North East Victoria	in
Nicholson River, The Prophet	North East Victoria	in
Pendarra, 448	North East Victoria	in
Terrick West Poll, 3.161	North East Victoria	in
Toland Poll, 040998	North East Victoria	in
Toland Poll, 050964	North East Victoria	Withdrawn
Toland Poll, 051416	North East Victoria	Insufficient progeny
Ag WA Baseflock, 20002058	Badgingarra (WA)	In
Dabrappy, 48	Badgingarra (WA)	In
Ejanding Poll, 045218	Badgingarra (WA)	In
Madrino, Afrino 363	Badgingarra (WA)	In
Mulureen Merinos Poll, E3173	Badgingarra (WA)	In
Shahs, WH76	Badgingarra (WA)	In
The Grange, 303251	Badgingarra (WA)	In

As AWI is aware the publication of MSS13 booklet has been delayed due to factors beyond AMSEA's control.

Minor changes made to this edition were as follows:

- The Top 25 tables were re-formatted to allow inclusion of tops and culls data, along with better descriptions of the breeding objectives.
- The percentile bands table was modified to include all bands at 10% intervals.
- The sire performance graphs were modified to remove the separation of sires entered before and after 2002.
- A column indicated stages of measurement for each sire was included in the main sire performance table.

The following table shows the number of copies of Merino Superior Sires 13 distributed in 2008.

**Table 5:** Distribution of Merino Superior Sires 13

<b>Distribution Group</b>	<b>MSS13</b>
Stud & Performance Associations	1465
AI Service Providers	47
CTSE Sites, AWI, SG	663
ABS	0
Individual breeder contacts	253
Consultants	448
Stud Stock contacts	107
Service Providers	212
<b>Total Distributed</b>	<b>3195</b>

The aim of the printing and distribution of MSS is to provide a hard copy of MSS to every Merino ram breeder in Australia. The aim is also to provide a hard copy of MSS to all Merino ram breeder's service providers and ensure these service providers have additional copies that they can distribute to their clients.

1. All Merino ram breeders

Each breeder who is a member of a Merino Stud or Performance Breeder organisation receives a copy via their organisation. These copies are distributed in bulk to the respective organisations and the organisation carried out the distribution. This system has the advantages of increasing the credibility of MSS and reducing the cost of distribution.

As well as breeders who are members of stud and performance breed organisations there are breeders who are sent a copy in the mail as they are not a member of one of these organisations.

2. Merino ram breeders service providers

All service providers who may have an influence on Merino ram breeder's mating decisions are direct mailed a copy of MSS along with an order form to allow them request additional copies for their own distribution.

CTSE sites are contacted directly to obtain their bulk order so that they could distribute copies at events they conduct and to breeders who have entered sires at their site.

Service sectors directly targeted by the distribution include Artificial Breeding companies, farm consultant, genetic advisors, on-farm data service providers, ultrasound scanners, and relevant staff within stock agencies, Departments of Agriculture, TAFE, and Universities.

## 4.2 Trait Measurement

Tables 6 and 7 summarise the additional trait measurements undertaken at each site for 2005 and 2006 drops since the publication of MSS12 and included in MSS13.

**Table 5:** Additional traits recorded on 2005 drop sire evaluation animals. All measurements recorded at the adult stage.

	ss	sl	wt
Elders Victoria	402	402	401
North East Victoria	268	268	269
South West Slopes	519	519	517

**Table 6:** progeny recorded by trait on 2006 drop sire evaluation animals. Rows highlighted with italic text refer to hogget measurements while those in plain text refer to yearling measurements.

	ss	sl	bw	wec
<i>Badgingarra (WA)</i>	<i>240</i>	<i>240</i>	<i>236</i>	<i>235</i>
Elders Victoria	536	536	526	496
New England	448	448	452	439
North East Victoria	447	447	455	
<i>Yardstick</i>	<i>543</i>	<i>550</i>	<i>522</i>	<i>508</i>

## 4.3 Sire Audit

On December 18, 2007 all entrants of sires who were active in the MSS system (ie, the sires had not been withdrawn) were contacted by mail.

We requested that the entrants contact us with updates to the following information:

- Sire name
- 16 digit ID
- Publication status in MSS
- Publication status in Sheep Genetics (SG)
- Ram fate (dead or alive)
- Semen availability

239 audit forms were posted, and by the cut off day for publication in MSS13, 76 replies had been received covering 266 sires.

The current status of the MSS database shows there are 1129 sires that have been entered in sire evaluation, of which 656 are able to be published in Merino Superior Sires, and 473 that have been withdrawn.

## 5. General Issues Arising

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The following general issues have arisen over the period January 2007 to June 2007.

### 5.1 Publication of Merino Superior Sires 13 and future editions

The publication of Merino Superior Sires 13 (MSS), scheduled for release in January 2008 was delayed due to a number of factors in relation to the MerinoSelect analysis.

Timing of the publication of future editions of MSS, commencing with MSS14 will be significantly altered and brought forward to October of each year (MSS14 will be published in October 2008). This proactive response to user feedback is aimed at making MSS more valuable to ram breeders as a selection tool by making it available well before joining decisions are made in the majority of areas.

### 5.2 Use of ASBVs in Merino Superior Sires

MSS12 (2007) was the first edition of MSS to report ASBVs. Previous editions had reported MSSBVs which were the result of a sire evaluation results only analysis. MSS13 will also report ASBVs.

The decision to report ASBVs was a result of lengthy discussions by the AMSEA Executive Committee and one that was by no means unanimous. However, in the interest of a common language, it was resolved to publish ASBVs.

This decision is now again being questioned by some involved in sire evaluation. Many users of sire evaluation and Merino Superior Sires feel that by reporting from the combined analysis, the value of sire evaluation data is lost, as in many cases it is swamped by on-farm data. The integrity and independence of sire evaluation data continues to be one of the services key strengths, which may be lost under the current practices. Conversely, many also believe that by reporting from the combined analysis, value is added to the sire evaluation data by way of increased number of records for many sires.

The AMSEA Executive will further consider this issue at the June meeting and resolve a direction for the publication of MSS14.

### 5.3 AMSEA funding and commercialisation of sire evaluation activities

In February 2008, the AWI Board resolved to continue funding the activities of AMSEA for a further 2 joinings (2008 and 2009) and the resulting measurement, analysis and reporting that is generated out of those joinings.

In doing so the AWI Board stated their desire to see sire evaluation commercialised after this funding period has been completed. This will present significant challenges to sire evaluation as it moves to generate an additional \$150,000 per year to continue to operate a base set of activities, which will likely not involve several of the 'industry good' projects it currently manages. Instead, sire evaluation activities are likely to be focused on producing commercial returns for those stakeholders that fund its activities.

These will largely be ram breeders through the payment of entry fees and commercial partners that through direct funding or in-kind support take up the slack left by the discontinuation of AWI funding. It is hoped that industry funding, either through organisations such as AWI or MLA, can continue to be accessed for specific projects that will provide a benefit to the entire industry.

#### **5.4 New and recommenced sire evaluation sites**

A new sire evaluation site at Longreach commence in 2007. Progeny are expected on the ground in the near future with the first set of results published in 2009. The Macquarie site has also been re-established in 2008 with a joining soon to take place at Trangie. Results for the Macquarie site will be also available in 2009. A total of 8 sites will join in 2008, with only Queensland (Bollon) and Tasmania electing not to join on account of seasonal difficulties.

#### **5.5 Visual Sheep Scores and Visual Trait Breeding Values**

AMSEA unanimously adopted the Visual Sheep Scores developed by AWI and MLA as standard practice at all sire evaluation sites. All of the visual traits included in the Visual Sheep Scores will be assessed and reported at all sites from 2008 on.

AMSEA has offered its significant visual traits database and support network of sites for the development and extension activities of visual trait breeding values. Ideally AMSEA hopes to publish visual trait breeding values for key traits in MSS14.

#### **5.6 Young Sire Program**

2008 sees the introduction of a young sire program into sire evaluation. Ram breeders will be provided with a financial incentive to enter young rams up to 2 years of age that have not been evaluated elsewhere. The young sire program is aimed at increasing the rate of genetic gain in the Merino industry through the performance recording of younger sires as well as adding value to the AMSEA database for future collaborative research on soon to be released technologies. The Young Sire Program will be implemented in addition to AMSEA's successful Extreme Sire and Show Ring Sire programs. All sire programs are currently funded through AWI.

#### **5.7 Changes to AMSEA Requirements**

Various changes have been made to the AMSEA Requirements over the past six months. These include:

- All Visual Traits included in the Visual Sheep Scores are mandatory.
- Fleece Valuing is optional and if carried out the NSW DPI wether trial software in will be used to value fleeces.
- Changes to the timing of data submission and minimal reporting requirements.
- No site is permitted to prevent an entrant from withdrawing the identity of their own ram.
- The Requirements were updated to allow for a proposal from the South West Slopes site proposal.
- Enable sites to separate twinning ewes to be run separately between scanning and tagging as long as they are recorded as separate management groups.
- Allow fibre diameter measurements to be taken at 5 months wool growth.



- Dohnes, SAMMs and Afrinos can be reported in MSS.
- Change the reference for selection of Extreme Sires to a relevant standard index or industry value.

The site report template was also updated to reflect these changes where necessary.

## **6. Evaluation and communications**

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During 2007 a survey of ram breeders was undertaken to gauge attitudes towards sire evaluation and Merino Superior Sires. The full evaluation report has been provided to AWI. Key findings included:

- 44% of Merino studs that sell over 50 rams per year have entered a sire in sire evaluation, with new entrants being attracted at a considerable rate.
- The main reasons ram breeders are entering sires in MSS is to benchmark their flock genetics and because MSS provides an independent evaluation of sires.
- 28% of stud breeders actively use MSS in either hardcopy or via the website.
- Sire evaluation entrants rated MSS as the most likely of all information sources to be used in making breeding decisions.
- Over 3,600 copies of MSS are currently distributed free of charge, with a further 450 being downloaded from the MSS website every year.