

final report

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Quality Assurance Procedures Manual for the ASGD

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Abstract

Why the work was done

Sheep Genetics Australia (SGA) objective is to achieve 'Genetic improvement for a sustainable and profitable Australian sheep industry facilitated by the world's best sheep genetic evaluation system'.

Customers of SGA need to have confidence in the genetic performance information being reported by SGA and breeders. To achieve this, an SGA quality assurance system is being established. The "SGA Breeder's Quality Assurance Manual" project would provide SGA ram breeders with a clear set of procedures to meet their component of the QA system.

What was achieved?

SGA Breeders' Quality Assurance Manual was published, presented and distributed at the launch of SGA. A high level of industry consultation has ensured a balanced and practical outcome.

The manual will underpin the quality of SGA breeding information and the confidence required for breeders – **both ram and commercial flock** - to use SGA and therefore the opportunity to maximise genetic improvement and profits of their flocks.

Executive summary

Why the work was done

Sheep Genetics Australia (SGA) is a national genetic information and evaluation service for the meat and wool sectors of the sheep industry. Its objective is to achieve 'Genetic improvement for a sustainable and profitable Australian sheep industry facilitated by the world's best sheep genetic evaluation system'.

Customers of SGA need to have confidence in the genetic performance information being reported by SGA and breeders. All sections of the industry felt that the way to most effectively and transparently achieve customer satisfaction was to establish and conduct a quality assurance program for the complete SGA system – including the breeders supplying and reporting data.

The objective of this project

The aim of the "SGA Breeder's Quality Assurance Manual" project was to ensure that breeders had a clear set of procedures that would allow them to, (a) supply data to SGA, and (b) report SGA outputs, that would meet an agreed minimum standard to allow accurate breeding decisions.

To achieve this aim the project's primary objective was to establish an effective Breeders' Quality Assurance Manual. The manual would set out the procedures and process to supply relevant documentation that would allow all ram breeders to have the opportunity to meet data supply and reporting requirements within the context of the overall SGA Quality Assurance (QA) system.

What was achieved?

SGA Breeders' Quality Assurance Manual was published, presented and distributed at the launch of SGA. In achieving this objective all the project milestones were met.

A high level of industry consultation and engagement with all stakeholders was a feature of the development of the manual. Industry consultation included presentation at the launch, the nine SGA information forums across all states of Australia, breeders' consultative group and several presentations to the SGA Steering Committee. This consultation along with continuous consultation with the SGA Technical Committee and SGA management and staff has ensured a balanced and practical outcome.

The overall outcome should be a breeders' quality assured system that will encourage a high level of involvement of breeders in SGA.

When and how industry can benefit from the work

The Breeder's QA Manual now provides standard operational procedures that allow a ram breeder to conduct a quality evaluation of their sheep. While the manual does not breed 'better' sheep the information in the manual is a basic tool to allow this outcome to be achieved.

The Breeder's QA Manual is in a form that will allow it to be regularly updated and therefore will be a sustainable investment into the future.

The impact now is to ensure confidence so that ram breeders become directly involved in SGA and for ram breeders and commercial breeders to use the breeding information produced by SGA.

The impact in 5 years will be that the involvement and use of SGA will deliver the Australian sheep industry sustainable and significantly higher gains in genetic improvement.

Who can benefit from the results?

The Breeder's Quality Assurance Manual will underpin the quality of SGA breeding information and the confidence required for breeders – ***both ram and commercial flock*** - to use SGA and therefore the opportunity to maximise genetic improvement in their flocks.

Studies show that genetic progress that is made in ram breeding flocks is passed on to their commercial flock ram buyers. This improvement provides rapid rates of genetic and production improvement that leads to large increases in profit for commercial producers.

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1 Background

Sheep Genetics Australia (SGA) – formally known as Australian Sheep Genetics Database (ASGD) - is a national genetic information and evaluation service for the meat and wool sectors of the sheep industry. Its objective is to achieve 'Genetic improvement for a sustainable and profitable Australian sheep industry facilitated by the world's best sheep genetic evaluation system'.

SGA is a Meat & Livestock Australia (MLA) and Australian Wool Innovation (AWI) project with a major contribution from AGBU, NSW DPI and CSIRO. Many other organisations and individuals have also contributed strongly.

Sheep Genetics Australia has been developed over the last three years to provide sheep breeders throughout Australia with the quality tools that will allow them to maximise the genetic change they wish to make.

SGA has utilised the very best knowledge and experience it could access to develop tools that are now available for breeders – both ram breeders and commercial flock breeders. These tools are leading edge and there is no reason for a breeder to hesitate using the tools that are appropriate to their needs and can be cost effectively employed. SGA will increase the range and quality of tools and will make them available in such a way that will allow many more breeders to use these tools in conjunction with their normal breeding practices.

Customers of SGA need to have confidence in the genetic performance information being reported by the SGA and breeders. All sections of the industry felt that the way to most effectively and transparently achieve customer satisfaction was to establish and conduct a quality assurance program for the complete SGA system – including breeders who are supplying and reporting data.

Without a quality assurance system in place the quality of the SGA output was very likely to be significantly lower and not meet the expectation of many breeders. The result would be a reduced uptake by breeders, therefore limited genetic improvement for individual breeders (both ram breeders and commercial flock) and all wool and sheep meat industry stakeholders. For the breeders who did become involved in SGA the lower quality SGA outputs would result in poor quality breeding outcomes reducing confidence and further reducing involvement and the potential benefit to all.

2 Project objectives

The aim of this project was to ensure breeders had a clear set of procedures that would allow them to, (a) supply data to SGA, and (b) report SGA outputs. These procedures would meet agreed minimum standards that would allow accurate sheep breeding decisions to be made.

To achieve this aim the project's primary objective was to produce and distribute a Breeder's Quality Assurance Manual. The manual would set out the procedures and the documentation that would allow all ram breeders to have the opportunity to meet data supply and reporting requirements (within the context of the overall SGA Quality Assurance system).

3 Methodology

A work plan was established to ensure that the objective could be achieved within the project timeline and that all those involved could understand the full process. Each step within the work plan had a timeline, outcome and identified the project's milestones. Each of the steps is listed below;

- (i) Step 1 Assess livestock industry QA practices and through discussions with the Technical Committee (TC) and Steering Committee (SC) establish the type of SGA QA system that would be implemented.
Milestone 1; Develop a plan of the QA procedures manual.
- (ii) Step 2 Develop a breeders' QA procedures manual (QA manual) that would be an effective component of the SGA QA system.
Milestone 2; Draft QA procedures manual.
- (iii) Step 3 Breeder consultation to ensure the QA manual procedures and the process breeders are required to document are practical and efficient.
- (iv) Step 4 Work with the TC and SC to obtain direction to finalise the manual.
- (v) Step 5 Finalise an edition of the QA manual for wider industry consultation.
Milestone 3; Revised draft of the QA procedures manual.
- (vi) Step 6 Printing and distribution of the consultation edition of the QA manual.
- (vii) Step 7 Wider industry education/consultation forums [not budgeted for in this project]
- (viii) Step 8 Breeder support and development following industry consultation.
- (ix) Step 9 Full QA manual review and publication of Edition 1.
Final Milestone (4); QA review and updated manual submitted.

4 Results and discussion

Each of the steps outlined in the methodology have been successfully carried out by the Project Leader - Allan Casey. The time lines were altered slightly by SGA to fit the dynamic nature of the development of SGA prior to the launch of SGA on the 18 October 2005.

The final step and final Milestone was the publication, presentation and distribution of the SGA Breeders' Quality Assurance Manual at the launch of SGA.

- (i) Step 1 Assess livestock industry QA practices and through discussions with the Technical Committee (TC) and Steering Committee (SC) establish the type of SGA QA system that would be implemented.
Outcome
A review livestock breeding industry QA practices was conducted by Allan Casey and presented to the Steering Committee (SC). The SC decided that a breeder's procedures manual was required and that breeders would have to meet these procedures prior to data being accepted into the SGA database.
Milestone 1; Develop a plan of the QA procedures manual. Completed
- (ii) Step 2 Develop a breeders' QA procedures manual (QA manual) that would be an effective component of the SGA QA system.

Outcome

A first draft of the QA manual was developed including the ability for the procedures to be meet ISO accreditation. This was presented to the SC and while the SC felt the structure and content were relevant it was decided that ISO accreditation was to demanding for breeders at this stage.

Milestone 2; Draft QA procedures manual. Completed

(iii) Step 3

Breeder consultation to ensure the QA manual procedures and the process breeders are required to document are practical and efficient.

Outcome

Based on feedback from the SC and the TC a second draft of the manual was produced for breeder consultation.

A consultative group of ram breeders (listed below) with a wide range of experience and expertise with different sheep breeds, trait evaluation, data submission and reporting of on-farm across-flock genetic evaluation was established. The group's task was to provide recommendations on ability of the Manual to be practically and efficiently implemented. The group was required to review the manual and submit areas of concern prior to a face-to-face 1day meeting. At the meeting each breeder raised their areas of concern - they were discussed and resolved. The group requested assistance from the TC on some matters to establish best practice. The outcomes from the meeting and follow-up with the TC were put in place in a third draft of the manual.

The breeders' review group was invaluable in the development of the manual. The expertise, enthusiasm and commitment of time of the breeders in the group are gratefully acknowledged. The cooperative approach between breeders was outstanding and allowed a truly industry relevant position to be established.

A QA Manual Breeders' Review Group

Mr George Carter, Mr Phil Toland, Mr Rodney Watt, Mr Charlie Massy, Mr John Keiller, Mr Phil Clothier, Mr Peter Horwood, Mr Michael Collins, Mr John McLaren, Mrs Sally Coddington, Mr Brett Jones, Mr John Symons.

(iv) Step 4

Work with the TC and SC to obtain direction to finalise the manual.

Outcome

The third edition was reviewed by the TC and the SC prior to industry consultation distribution. Both committees discussed and resolved all outstanding issues. The SC established a sub-committee to resolve the issues that needed more detailed discussion. Like the breeders' review committee this subcommittee played an essential role and resolved the most difficult points. The subcommittee members are acknowledged for their outstanding ability to provide the balance between technical requirements, practice implementation and SGA operational needs.

SGA Steering Committee – QA Sub-committee

Mr Rodney Watt, Mr Geoff Lindon.

- (v) **Step 5** Finalise an edition of the QA manual for wider industry consultation.
- Outcome
With reference to both the TC and SC an industry consultation draft was finalised for public distribution.
- Milestone 3;** Revised Draft of the QA procedures manual. **Completed**
- (vi) **Step 6** Printing and distribution of the consultation edition of the QA manual.
- Outcome
Printed copies were produced and distributed as requested. The manual was also available on the web as a component of an SGA industry consultation package that was widely promoted through the rural press.
- (vii) **Step 7** Wider industry education/consultation forums [not budgeted for in this project].
This step was conducted following the SGA launch (Step 9).
- Outcome
SGA presented industry forums at 9 locations across all states of Australia. A QA Systems presentation was a key component of the forums. Several points were identified during the forums that resulted in variations being made to the manual.
- Following this upgrade an editor reviewed the manual to ensure readability was maximised. A final technical review was conducted by the author and SGA.
- (viii) **Step 8** Breeder support and development following industry consultation.
- Outcome
Many valuable points were made by the industry submissions that resulted from the industry consultation phase. Many helpful comments were received on the manual. The submissions were very supportive of the QA system in general and the Breeders' QA Manual in particular however individual issues raised were a major benefit in finetuning the manual.
- (ix) **Step 9** Full QA manual review and publication of Edition 1.
- Outcome
All comments received during industry consultation were reviewed and changes made following discussions with the TC and SC to obtain an agreed position to finalise Edition 1 of the Breeders' QA Manual prior to the launch of SGA.
- NSW DPI printed edition 1 of the manual for the launch of SGA on the 18th October 2005.
- An Edition 1 of the manual will be printed by SGA following industry forums (Step 7).
- Final Milestone (4);** QA review and updated manual submitted. **Completed**

5 Success in achieving objectives

The aim of the project was achieved.

The manual produced by the project sets out clearly defined procedures that allow breeders to:

(a) supply data to SGA, and (b) report SGA outputs. These procedures will allow SGA to underpin its ability to produce accurate breeding information for its clients and industry in general.

The widespread industry consultation and education taken within the project should ensure the QA procedures can be met in practice and the correct balance with technical requirements has been achieved.

SGA is committed to only allowing breeders who supply data that meets the QA procedures being able to supply data to the SGA database. There will be a period of two years from 1 November 2005 to allow breeders time to make any adjustments to their breeding, management and data handling before they must meet the QA procedures.

6 Impact on meat and livestock industry

Impact - now & in five years time

Ram breeders in Australia have never had a reference that supplied standard operational procedures to conduct a genetic evaluation of their sheep. This has been a major limitation to industry wide uptake of good breeding practice. Such a reference is considered essential in all industries to underpin and maximise performance. The Breeder's QA Manual now provides such a reference.

While the manual does not breed 'better' sheep, the manual is a basic tool to allow this outcome to be achieved. In the past evaluation procedures has been provided to individuals, they have often been ad hoc, mixed with other information, not widely available, or specific to a small group of breeders – all of which has limited the uptake of procedures across industry.

The Breeder's QA Manual is in a form that will allow it to be regularly updated and therefore will be a sustainable investment into the future.

The impact now is to ensure confidence so that ram breeders become directly involved in SGA and for ram breeders and commercial breeders to use of the breeding information produced by SGA.

The impact in 5 years will be that the involvement and use of SGA will deliver the Australian sheep industry sustainable and significantly higher gains in genetic improvement.

7 Conclusions and recommendations

Conclusions

A Breeder's Quality Assurance Manual has been delivered to the sheep industry. It provides minimum operating procedure that breeders must follow to allow them to be involved in SGA. These procedures underpin the quality of SGA breeding information and the confidence required for breeders – both ram and commercial flock - to use SGA and therefore the opportunity to maximise genetic improvement.

The widespread industry consultation process that was the basis of the manuals development has been vitally important to the final content and the attitude of breeders toward the manual. Both will be critical to uptake of the manual.

All stakeholders were fully engaged in the process of development of the Manual. The standout feature of this engagement has been the involvement of breeders that has ensured a practical outcome in balance with technical requirements. The involvement of many individual breeders is gratefully acknowledged. The assistance of the SGA Technical and Steering Committees as well as SGA staff was invaluable.

Recommendations

Distribution

While Edition 1 of the manual has been available to breeders since the launch of SGA on the 18 of October there is an urgent need for the updated version of Edition 1 to be made available to industry as soon as possible.

Support

Breeders need to have support to use the manual and discuss issues that limit its technical or practical acceptance. The support should start no later than when the updated version of Edition 1 is distributed and continue at least up until the 1st of November 2007 when procedures must be met. Breeder support will ensure that breeders are aware, informed and in the best position to make any changes to the evaluation or reporting procedures they are currently using. A support person would maintain the suggested and approved variations so that the 2nd edition can be efficiently produced.

2nd edition

A 2nd edition of the Breeders' QA Manual should be produced by the 1 November 2007. The 2nd edition would contain any variations required following the first 18 months of use of the updated version of edition 1 that is currently about to be published by SGA.

ISO Accreditation

Prior to the development of a 2nd Edition the value of ISO accreditation to the breeder's QA system needs to be reviewed and if necessary built into the 2nd Edition.

8 Bibliography

Casey A.E. (2005) Sheep Genetics Australia Breeders' Quality Assurance Manual – SGA Launch 18 October 2005.