



Issue 6

SIL Newsletter

Spring 2007

MEAT & WOOL NZ

Genetics

Welcome to our spring newsletter, and thank you for your support throughout the season.

Many breeders are now well underway with a new breeding season. The variable market and seasonal conditions continue to challenge all. The ongoing impact of the East Coast North Island drought and other market events continue to test the most resolute farmer/breeder. Like all of you, the last few months have been a busy time at SIL. You will notice a few new enhancements and an opportunity to get up to date information from the SIL website. As always, if you would like further information, please don't hesitate to contact us via our phone or email help line.

In this newsletter we will cover:

- Recording Barren Ewes
- New SIL developments
- New & Updated SIL technical notes available on the website
- Changes in SIL standard indexes
- Outside Sire Correction method – New SIL development
(reprinted from last newsletter due to importance)
- AbacusBio – Abacus Accelerator

Recording Barren Ewes

A recent analysis of lambing data by SIL has indicated that many flocks are not recording barren/dry ewes. A ball park figure for expected barrens in a flock is 2 – 6 % with the use of follow up rams. A 0% figure indicates barrens are not being recorded!

By not recording barren ewes data lambing results can be biased. This is shown in the following example:

*A ewe has three sets of twins in a row. She is mated in her fourth year but doesn't get in lamb and is culled. If her lambing string was recorded as 222 her average lambing % would be 200%. If her lambing string was more correctly recorded as 2220 her average lambing % would be 150%. **This is quite a difference!***

Reasons why barren ewes should be recorded:

- Less biases in genetic merit calculations.
- More accurate breeding values.
 - » Reproduction is lowly heritable so the more records there are (including barren ewes) the

more accurate the breeding value calculations will be. Remember, genetic merit is influenced by the performance of relatives. Cull ewes may have sisters still in the flock.

- Families with different fertility are more easily seen.

By not recording barrens:

- Biases will occur in genetic merit calculations.
 - » These will tend to overestimate true merit for some sheep.
- Less spread of breeding values.
- Not enough genetic credit is given to those ewes that do get in lamb.
- More time/resources needed to build connectedness for across flock analyses.

Best Practice:

- Submit Mating Lists
 - » This can be used to identify dead and culled ewes which can be given appropriate fate codes.
 - » All mated ewes are on these lists so there is less chance of mis-recording barren ewes as not mated and together with the lambing list helps identify ewes that die.
- Submit Lambing Lists
 - » Record all dead lambs **so ewes and ewe families get credit for producing lambs (dead or alive)**. The death of lamb(s) is accounted for in the Survival sub index.

A summary of barren ewes and lambing percentages can be obtained from the SIL Data Auditing Tools – Reproduction & Survival (see SIL Technical Note at www.sil.co.nz). Your own bureau can run any of these tables for you. Recommended tables for identifying barren ewes and ewe fates are:

- **Tables M1:** Mating & Lambing Summary
 - ewe count by ewe age group.
- **Table M3:** Dam Fates
 - ewe count by ewe age group.

If you have any queries about the recording of barren ewes please contact your bureau directly or a SIL advisor on 0800 SILHELP (0800 745 435) or send an email message to silhelp@sheepimprovement.co.nz

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New SIL developments

At the end of June, SIL introduced five new developments into the SIL system:

1. Facial Eczema sub index

- » A new economic weighting means Facial Eczema can now be included in the DPO index.

2. Twinning Rate sub index

- » A sub index to enable selection to increase the proportions of twins and decrease the proportions of triplets at the same lambing percentage.

3. Hogget Lambing goal trait group

- » Breeding values can be produced for Hogget Fertility (ability to get in lamb) & Hogget Fecundity (number of lambs the ewe hogget has).

4. Data Auditing Tools for Reproduction and Survival

- » Summary tables for lambing and survival information from flock records characterize flock data. i.e. % of barren ewes, % of lambs that have survived.

5. Outside Sires Method

- » Method developed to provide best-bet breeding values for new rams brought into flocks when there is insufficient progeny information.

New & Updated SIL technical notes available on the website

There are nine new and updated technical notes on the SIL website.

1. SIL standard index weightings – July 2007 – NEW

- » Brief explanation of how the Twinning Rate & Facial Eczema sub indexes and the Hogget Lambing goal trait group affect the Dual Purpose, Terminal Sire and Wool Production System overall indexes.
- » Tables of the current economic weighting for each BV are appended.

Changes in SIL standard indexes

– by Dr Mark Young

2. Facial Eczema – UPDATED

- » Reference to the new economic weighting & sub index.

3. Short note – Using the SIL Growth & Meat sub indexes – NEW

- » How these sub indexes interact – of particular importance in the SIL Dual Purpose index.

4. Mid-Micron sheep indexes – UPDATED

- » Minor adjustments to text and economic weightings table to accommodate twinning rate, hogget lambing and facial eczema.

5. Outside Sires – Estimating genetic merit when there is insufficient information – NEW

- » Explanation of outside sires method used in genetic evaluation.

6. Genetic merit for Twinning Rate – NEW

- » Explanation of new twinning rate sub index.

7. Genetic Merit for Hogget Lambing – NEW

- » Explanation of new hogget lambing goal trait group breeding values.

8. From farm measurements to SIL indexes – UPDATED

- » Tables and text updated to accommodate the twinning rate, facial eczema & hogget lambing changes.

9. Data Auditing Tool – Reproduction & Survival – NEW

- » Description of tables and how they can be used.

All of the technical notes can be found on our website (www.sil.co.nz) under Technical Notes or under the New Developments link.

Any queries you may have regarding these new developments and technical notes please contact your bureau or SIL by using the SIL helpline facilities:

0800 SILHELP (0800 745 435)
silhelp@sheepimprovement.co.nz

When SIL was set up, the breeding objective aimed for carcasses around 14kg in weight. The industry has moved on a lot since then and now carcasses of 17+kg are the norm. SIL has altered the weightings within its standard indexes to reflect the goal of producing these heavier carcasses. This effectively scales up the emphasis on Growth and Meat relative to other traits to a small extent. The effect of these changes has been examined and the following changes may be apparent on your SIL reports.

- On average the Overall indexes will increase due to increases in the Growth and the Meat sub-indexes.
- There will be no noticeable change in other sub-indexes.
- While the SIL Dual Purpose Reproduction (DPR) is still the sub-index that influences the DPO most, there will be a little more emphasis on DPG and DPM from now on.
- Within the Meat sub-indexes there will be slightly more emphasis on Lean relative to Fat.
- Some animals will move down in their index but relatively few will do this compared to the number that go up.

SIL is committed to ensuring that the tools it provides to sheep breeders are relevant to the New Zealand sheep industry. These changes reflect this objective.

If you have any queries about these changes please direct them to silhelp@sheepimprovement.co.nz or telephone 0800-silhelp (0800-745-435)

Outside Sire Correction method New SIL development

(reprinted from last newsletter due to importance)

Until now, breeders using a sire from outside of their analysis group have not been able to attribute full genetic potential to the new sire until the sire has adequate number of progeny recorded in the flock. This has been less problematic for most traits (Growth & Meat) where progeny data are collected relatively quickly, but reproduction can not be effectively calculated without progeny lambing records or performance data on relatives in other flocks.

An Outside-Sire Correction method has been implemented in the SIL Genetic Engine (GE) and is now operational. This addresses the situation where rams are brought into flocks without any records, and their breeding values (BVs) are set to that of the flock average in the base year (close to zero in 1995 commonly) until such time as they have sufficient progeny records to give a better estimate. This is particularly a problem for traits that have low heritability and/or take a long time to get sufficient progeny records (e.g. NLB).

The Outside Sire Correction method makes use of the SIL Advanced Central Evaluation (ACE), an industry-wide across flock analysis. Use of the ACE analysis offers the ability to use a more meaningful BV for these 'outside sires' until they have sufficient progeny records within the flock to provide a better estimate than the adjusted ACE value.

The Outside Sire Correction method is available for use by bureaus.. It is an option that can be switched on by your bureau when required for a genetic evaluation. The standard (default) evaluation will not use this method.

AbacusBio – Abacus Accelerator A commercial service for SIL breeders

Abacus Accelerator[®]

Accelerating genetic progress



AbacusBio is pleased to offer you their new Abacus Accelerator breeding package. They have developed a suite of services that utilise SIL information, which are designed to increase your rate of genetic progress, safe guard against inbreeding and maximise your business return. Their services have been developed by internationally recognized geneticists based at AbacusBio. There is an annual fee for Abacus Accelerator[®] membership which entitles you to the Accelerator calendar and news, Accelerator e-reports, Inbreeding diagnostics, SIL ANI-MATE[®] and an Accelerator relatedness table. In addition to what you get through your membership, there are a number of other services offered to Abacus Accelerator clients for a discounted price.

For a full information pack please contact

Anna Campbell (03) 477 6375,
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email accelerator@abacusbio.co.nz

Contact SIL

Phone: 0800 SILHELP (0800 745 435)

Email: silhelp@sheepimprovement.co.nz

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