Welcome to the Spring edition of the Breeder’s Bulletin

Sheep Genetics have had a busy few months, getting Regional forums, Scanner accreditation and other various events over and done for the year. It was good to catch up with a wide variety of breeders and especially beneficial for Will and Caris being able to meet everyone.

We have also had a change of scenery with a new office in September. This has been a good move for the team and provides plenty of space for everyone. Please note the new address and contact details below, the old phone number is currently being forwarded but will be disconnected shortly.

New Contact Details

Please note that the old contact details will still appear on some publications, but will be updated as we reprint them.

General enquiries: 02 8055 1818
Fax: 02 8055 1850
Address: The Short Run, UNE ARMIDALE NSW 2351

The annual survey will be sent out shortly on email, we encourage everyone to complete this, it is only a short survey and should take about 15mins. Completing the survey allows members to have their input on the direction of Sheep Genetics and assists us to identify areas for improvement.

As advised previously David Rubie will not be working Mondays for the next few months. To ensure that the Merino data is processed in a timely manner Samantha Rawson will be working on Mondays and Thursdays. Samantha is an experienced data processor who also works with Breedplan data.

Christmas will see the office closed from the 24th of December 2015 and reopening on Monday the 4th January 2016. Due to the public holidays, there will be some changes to the analysis dates and we encourage everyone to check the website to ensure you have plenty of time to submit data.

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LAMBPLAN Development Officer Will Chaffey and Sheep Genetics Manager Hamish Chandler travelled to SA in June to conduct an Ultra-Sound Carcase Scanner Accreditation. Thanks must be given to Bill Close of Newbold studs, for the use of his sheep and facilities. The accreditation ran over two days, with the first day involving an afternoon session with Chris Graham the Director of BCF ultrasound, giving an advanced operators guide and fundamentals session on using an ultra-sound machine. Chris highlighted the rudiments of using an ultra-sound machine and how to best set up a machine for the purpose of scanning for eye muscle depth and fat depth. All attendants found Chris’s session particularly interesting and valuable.

The Sheep Genetics carcase scanners accreditation process requires the scanners to take two sets of measurements on at least 40 animals on the same day. There are minimum Correlation and Residual Standard Deviation thresholds that must be met on their duplicate measurement of all 40 animals in order to become accredited. The same 40 sheep are then processed through a CT machine and the 12/13th rib site is then measured. The measurement from the CT machine is considered to be a ‘true’ reading of the Fat and Muscle Depth and the carcase scanners measurements are then compared with these results. There are also minimum Correlation and Residual Standard Deviation thresholds that must be met between their readings and the CT measurements.

It is a strict requirement of Sheep Genetics Breeders Quality Assurance Guide that all carcase scanning information be recorded by an accredited or provisionally accredited scanner. For this reason, we now require all breeders to submit the accreditation number of their scanner when sending in data. It would be greatly appreciated if you could leave the accreditation number of your scanner in the email when submitting your data, or alternatively by contacting the Sheep Genetics office.
An accredited or provisionally accredited scanner must supply their accreditation number to you at scanning, you can confirm your scanner is accredited by checking the list over page and on the Sheep Genetics website.

We will be looking at running another accreditation course in the coming 12 months, as several carcase scanners were unable to attend the Roseworthy accreditation in June.

This is a timely reminder to make sure you meet the following carcase scanning requirements or risk the measurements taken at scanning NOT being used in the analysis:

1. Each individual animal weighs a minimum of 30kg.
2. There must be on average, greater than 1.5mm of fat depth. (This allows for a variation to be seen between animals measured).
3. Animals are to be scanned by an accredited scanner, and that scanners 5 digit accreditation number provided to Sheep Genetics.

An accredited scanner: is someone who has met the scanning accuracy criteria to be accredited by Sheep Genetics. It is achieved by submitting several sets of scanning data to demonstrate repeatability. Carcase data collected by provisionally accredited scanners may be submitted to Sheep Genetics for routine evaluation.

(P) Provisional accreditation: can be achieved by submitting several sets of scanning data to demonstrate repeatability. Carcase data collected by provisionally accredited scanners may be submitted to Sheep Genetics for routine evaluation. Provisionally accredited scanners must attend to the next available Sheep Genetics scanning accreditation workshop. Full accreditation is achieved by attending a Sheep Genetics scanning accreditation workshop.

All provisionally and fully accredited scanners are required to attend periodic Sheep Genetics scanning accreditation workshops to update their accreditation.

A current listing of accredited scanners can be found over the page, or on the website under the Service Provider menu.
Accredited Scanners

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<thead>
<tr>
<th>Name</th>
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Analysis Dates

**LAMBPLAN:**
- 15th December 2015
- 15th January 2016
- 1st & 15th February 2016

**MERINOSELECT:**
- 21st December 2015
- 7th January 2016
- 21st January 2016

A calendar of these dates can be found on the website, and can be printed for future reference.

All data must be submitted to database@sheepgenetics.org.au by 5pm AEST on the dates listed above for inclusion in the analysis.
Using Sheep Genomics 12k to improve eating quality has a very bright future

Eating quality is a key trait in a consumer’s decision to purchase a meat product and the price they are prepared to pay. Willingness to pay studies conducted by MLA across both beef and lamb have shown that consumers are willing to pay twice the price for a 5 star product in comparison to a 3 star product. If lamb carcasses can be accurately assessed for eating quality in abattoirs there is substantial opportunity to achieve higher retail prices for superior eating quality lamb. As described by Dr Graham Gardner at the Sheep Genetics 2015 Leading Breeder forum (presentation available at http://www.sheepgenetics.org.au/Resources/Leading-Breeder-2015) a key focus area for the Sheep CRC is developing technology to enable eating quality of individual carcasses to be assessed. An important consideration for ram breeders and commercial lamb producers are the implications for breeding programs and ram selection.

Results on incorporating eating quality into terminal selection indexes were presented at the 2015 Leading Breeder forum by Dr Andrew Swan, Animal Genetics and Breeding (also available online). Dr Swan showed that incorporating eating quality into future selection indexes could be associated with a 26% increase in economic gain across the supply chain compared to the current Sheep Genetics Carcase Plus index. Achieving this increase in genetic gain relied on ram breeders using the Sheep Genomic 12k Tests to identify and select animals that are superior for eating quality traits in a balanced way relative to other traits of economic importance. The key traits for eating quality are Intramuscular Fat (IMF) and Shear Force (ShearF5). Both traits are currently reported as Research Breeding Values with the Sheep Genomics 12k test provides significant information. Breeding value accuracies of approximately 50% at time of selection can be expected. Importantly, modelling conducted by the Sheep CRC has shown over 80% of the potential gain from using the Sheep Genomics 12k Test in future selection indexes that incorporate eating quality can be achieved by testing 20% of the ram drop. This approach would allow ram breeders to rank animals on early life performance before identifying a smaller proportion of the ram drop to test.


Website Upgrades

- Web searches now allow a query size of 10,000 animals rather than the 300 max it has previously been capped at. This will allow that flocks can access and download their entire stud information.
- Website addresses can be added by logging in and clicking on the tools link. This will then appear next to your animals ID in the search results.
- You can nominate a service provider who can access your data by accessing the Tools when logged in.
- Sale catalogues listed on the Sheep Genetics site will automatically list on the Ramselect website.
- Animals listed in sale catalogues will have a FS indicator listed next to them.
It's come to that time of year again. Sale season is over for majority of the country and it's time to start thinking about the next joining. Sheep Genetics have created a quick checklist of topics to think about through sire selection, joining and lambing to ensure that we are reporting the most accurate ASBVs possible.

- **Enough linkage in the sire list**
  Linkage allows a comparison between one group of animals to another through the use of common genetics. To ensure that animals are effective in the analysis linkage is needed across management groups in your flock, across year drops in your flock and across flocks. When selecting sires it is important to check that your animals will be linked for the traits you are interested in.

- **Ewe allocation**
  The allocation of sires to ewes can affect the ASBVs calculated when selected mating’s are occurring and the dam is not identified. If the dam is not being identified the ewes should be allocated as randomly as possible to stop biasing of the sire’s ASBV occurring. If there is enough known about the ewes in your flock, Matesel can be used to identify the best possible matches while monitoring inbreeding. Ewe allocation can be recorded in the new Mating module in your software programs.

- **Conception Method and Pharmaceutical intervention**
  The mating module in your software program will allow you to record mating allocations, conception method and whether drugs had been used to aid conception. It is important to make sure that you know the right conception method of animals and if they were aided by pharmaceutical drugs for the calculation of reproduction traits.

- **Syndicates/back-ups**
  Back up and syndicate information can also be recorded in the mating module. If you are putting back-ups in it is important to note the dates they were put in. A syndicate can be a helpful way to ensure pregnancies, however it makes it more difficult to calculate a correct ASBV if we do not know the animal’s sire. If you know the animals that make up your syndicate you can submit them through a named syndicate which will give Sheep Genetics more information to work with. Unfortunately after more than 30% of a flock’s lambs are born to a syndicate the ASBVs are less accurate and calculating linkage is difficult.

- **Pregnancy scanning**
  The pregnancy scanning information recorded on your ewes can now be used in the reproduction analysis. Scanning to identify multiples is preferred as it gives a measure of both fertility and litter size. Dead at birth lambs still need to be identified with DAB tag numbers. Wet/Dry pregnancy scans wont be used in the analysis at this stage.

- **Ewe management and lamb groups**
  Lifetime ewe management has been adopted widely across the country and requires a difference in management of ewes depending on their condition or number of lambs it is bearing. Any differences in management that will affect a lambs performance has to be recorded and submitted to Sheep Genetics to avoid incorrect comparisons being made, including management of their dam during pregnancy. If there is a difference of management between ewes while pregnant make sure that their lambs are grouped accordingly and that there will be linkage between the different groups.
Enough linkage in the sire list
- Across flocks
- Across management groups in your flock
- Across years in your flock
- Linked for the traits in your breeding objective

Ewe allocation is unbiased
- Record full pedigree where possible
- Randomly allocate ewes to sires where dam pedigree is not recorded.

Conception Method and use of drugs identified
- Conception method is recorded (1=natural, 2=ET, 3= AI etc)
- Any assistance from drugs is noted in software for future reference.

Syndicates/back-ups
- Back-ups are recorded
- Syndicates that are known have a sire ID including NAM
- No more than 30% of flock are from a syndicate.

Pregnancy scanning
- Pregnancy scanning is recorded
- Scanning for multiples is preferred
- Mating module information is submitted to Sheep Genetics.

Ewe management and lamb groups
- Record difference in management of ewes during pregnancy
- Record difference in lambs performance due to management

Sheep Genetics clients are now able to use an online individual selection and mating allocation tool ‘MateSel’. MateSel is an internet based program run by Sheep Genetics which requires breeders to upload a list of eligible males and females to be mated or selected. Typically the list of animals that get uploaded, are a group of animals which have been individually classed and assessed to not have any undesirable structural or visual characteristics.

Once the useable animals are uploaded to MateSel, the user then elects what the desired outcomes for the mating result should be via breeding values, for example cap Birth Weight or increase growth rate.

The end result is a list of individual mating allocations which the breeder then takes to the yards to use at joining, alternatively it could be used to aid their decision making when selecting which genetics to purchase and use in their flock.

A key concept of the program is that the user also has the ability to control and cap inbreeding rates of their flock, using the pedigree from the Sheep Genetics database. Controlling inbreeding reduces the potential of terminal disease occurrence and inbreeding depression which can lead to lower fertility and growth rate.

Sheep Genetics clients will be able to access MateSel after successfully completing a training course. If you are interested in finding out more about MateSel please contact the office.
Sheep Genetics Organisational Setup

**MLA/AWI**

**Executive Committee**
- Dr Jane Weatherley (MLA)
- Richard Apps (MLA)
- Dr Paul Swann (AWI)
- Geoff Lindon (AWI)

**Advisory Committee**
- **Ron Cullen (Chair)**
- **Murray Long** - 230324
  Pendarra White Suffolks, NSW
- **Mark Mortimer** - 601250
  Centre Plus Merinos, NSW
- **Mark Murphy** - 601365
  Karbullah Merinos, QLD
- **Dale Price** - 161886
  Majardah Poll Dorsets, SA
- **Warren Russell** - 501704
  Melrose Merinos, VIC
- **Sara Wilson** - 470169
  Jilakin Downs Dorpers WA

**Sheep Genetics**
- **Manager**
  - Hamish Chandler
  - Fiona McLoughlin
  - Nicole Williams
- **LAMBPLAN**
  - Will Chaffey
  - Stephen Field
- **MERINOSELECT**
  - Caris Jones
  - David Rubie
  - Samantha Rawson

**Technical Committee**
- Dr Rob Woolaston (Chair)
- Dr Rob Banks - AGBU
- Dr Daniel Brown - AGBU
- Dr Andrew Swan - AGBU
- Dr Kim Bunter - AGBU
- Mr Geoff Lindon - AWI
- Dr Alex Ball - MLA
- Dr Julius Van Der Werf - UNE
- Dr Sam Clark - UNE
- Mr Sam Gill - MLA
- Dr Ben Hayes - VIC DPI
- Dr Sue Mortimer - NSW DPI
- Dr Matthew Kelly - U of QLD
- Mr Mark Mortimer - Industry
- Mr Hamish Chandler - Sheep Genetics

Sheep Genetics staff should always be the initial contact point for all communication