



## SHEEP CRC SPRING NEWSLETTER

### *From the Homestead*

The major landmark during the last quarter was the launch of the CRC's new 12k Genotyping test. This new test, launched at the Breeder Workshop held at the end of August, provides similar accuracies achieved with the standard 50k test, but at less than half the cost. There has been strong interest in the 12k test as well as in the parentage/horn test with significant numbers of orders already placed.

Further details about the test and information on ordering the 12k test or the parentage/horn test is available on the CRC's website - visit the Homepage and click on 'Genotyping tests' under the 'What's Hot' tab.

The Wool Program continues to have success with the Wool Pilot Project. The aim of this Pilot Project was to determine wool supply chain interest in each of the new wool measurement systems - the Wool HandleMeter and the Wool ComfortMeter. As part of the pilot project the CRC hosted a mini-conference during Wool Week in Melbourne in September. This provided an opportunity for a cross-section of the wool industry to hear first hand from George Shen, of the major Chinese knitting company, Mengdi, and Natalie Skubel of Country Road. The response by industry to the new opportunity for measuring comfort and handle has been very positive. There has also been further feedback on the new measurement systems following workshops with leading retailers and brand managers in the US and UK. The information provided during the pilot project will be used to develop a commercialisation plan expected to be completed before the end of the year.

As we approach the final stages of the CRC it is increasingly important that we complete the research activities to the point of publishing the results in research journals as well as in forms that are easily accessed and utilised by industry. There are three special edition publications: Animal Production Science, Meat Science and Journal of the Textile Institute that are devoted to documenting the CRC's main research achievements. The quality of the research papers is impressive, and it is also very satisfying to see the research published in prestigious international journals.

The CRC's final conference scheduled for 9th July 2014 in Adelaide will provide an important opportunity to report the key results to an industry forum. The focus of the presentations will be to describe the scientific findings in terms of their practical application. With the timing of the conference being just prior to the LambEx event it is anticipated that there will be a good attendance of producers and breeders.

The CRC's application for a five year extension is through to the final stage of the selection process and we expect to know the outcome by the end of December. If successful, the new program will officially commence in July 2014.

*James Rowe, CEO*

#### In this edition....

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Application update**

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**SHEEPCRC**

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## SHEEP CRC UPDATES

### Sheep & their Management

Adoption activities continued to be dominated by RamSelect Workshops and capacity building in genetics. Planning has also commenced for a National Producer Survey to quantify the industry impacts resulting from the investment in this Program. The survey is expected to be completed early in 2014.

#### Matching genotype and production system

The High Rainfall Zone edition of 'Sheep - the simple guide' has now been completed. Development of a version for the Northern Tablelands, which will be the final CRC product from this project, is underway. The Ram Buyer's Guide has proven to be very popular and all participants who have attended a RamSelect workshop in the last 18 months have received a copy.

#### Reproduction efficiency

The Information Nucleus Follower reproductive data for the 2012 breeding year has been added to an earlier analysis, and a revised analysis considering main effects and sire ASBVs in relation to maternal efficiency is in progress. A final genetic analysis of reproductive traits including survival in relation to 14 indicator traits will be finalised through the Animal Genetics and Breeding Unit (AGBU). Analysis of the survival status of all Followers from the 2007 to 2011 drops has been undertaken, with specific fates allocated, depending on information taken from the database and from communication with individual sites. Most extension activities relating to improving reproduction efficiency are occurring outside the CRC.

#### Parasite control

Draft plans have been developed for computer simulation modeling to predict the effects of targeted treatment strategies for a range of scenarios (environment, drench type, percentage not drenched, drench resistance level) on worm control and drench resistance management. The modeling is expected to be completed in December 2013.

#### Genetics training

The CRC has developed and provided a first set of training resources to UNE and NE TAFE. The resources on ram selection, nutrition, reproduction and worm control will be used for teaching students the practical components of the Bachelor of Agri-food Systems course to be launched in 2014. The course will be available in distance education mode with residential schools to undertake the practical teaching units, including Sheep CRC materials. Additional resources on eID, flystrike, worms and lice will be provided to UNE and NE TAFE in the near future.

### Wool Quality



*Image: Dr Maryam Naebe from Deakin University demonstrates the Wool HandleMeter at the Sheep CRC Wool Week Conference*

The most significant events this quarter have been the successful Wool Week conference in Melbourne, filming and interviews on the Wool ComfortMeter and Wool HandleMeter for a feature on the ABC Landline program, promotion of the instruments through a feature article in the global textile magazine 'Twist' and the successful retail workshops held in the USA and England.

#### Wool ComfortMeter (WCM) and Wool HandleMeter (WHM)

The pilot trial has gathered further momentum with most of our planned trial partner positions now committed. Those partners that have had their fabrics tested are in receipt of detailed reports on the WCM and WHM measurements. These include a major knitter and a major spinner in China, as well as a major spinner in Italy. Currently reports are being finalised for a major European knitter and retailer, while samples are being tested in Melbourne and China for New Zealand and US pilot trial partners. Travel documents and arrangements are now in place to send WCM and WHM instruments to Mauritius at the request of Ciel Textiles Group.

Two successful retail workshops were held recently in Seattle and New York with attendance from 15 global retailers/brands and the US Textile press. Two workshops were also held in London along with one-on-one meetings with Marks and Spencer, Burberry and interviews with possible distributors of the instruments.

A global working group has been established under the auspices of the International Wool Textile Organisation to develop and progress two test methods to cover the WHM and WCM. It is hoped a draft test method could be completed for commercial use by early 2014.

## SHEEP CRC UPDATES

### Meat Quality

#### Measuring meat science phenotypes

Slaughtering of the new resource flocks at Katanning and Kirby is now complete and laboratory analyses are underway.

#### Analyses of Meat Science traits by AGBU/UNE

A spreadsheet and data sets have been sent to the Animal Genetics and Breeding Unit (AGBU) for further genetic analysis of the meat science traits.

#### Lamb Supply Chain Group

The Lamb Supply Chain group met in Melbourne during September. Planning is progressing to develop a new strategic R&D plan for lamb. Visits were made to the Australian Lamb Company and a Coles feature store.

Specific Supply Chain interactions: Thomas Foods International (TFI) – Dr David Rutley has been appointed as the Supply Chain Officer. A meeting between TFI and members of the Lamb Supply Chain Group was undertaken in August. David brings very significant abilities, especially in meat science and data analysis skills.



### Education & Training

#### Postgraduate Education

Of the 37 students enrolled in PhDs and Masters programs, 12 have either been awarded or submitted their degrees. Plans have been put in place for the 2013 Sheep CRC Postgraduate Conference and Professional Development Workshop, to be held at Aanuka Beach Resort, Coffs Harbour. MLA (13 students) and the Pork CRC/Australian Pork Limited (4 students) will also have students represented at the conference. This year the professional development workshop will be run by Russell Barnett and focus on adoption science – in particular the redesign of experimental work to enhance its adoption.

### Information Nucleus (INF)

The delivery of genomic breeding values started the new year with a new product: the 12k SNP chip. This is a lower cost genomic test that can deliver a similar genomic prediction accuracy as the 50k SNP chip. We have used imputations to recover 50k information from 12 genotype data and the imputation accuracy is usually over 90%. The prediction accuracy is over 95% of that of the full 50k chip. The cost of the 12k chip is ~\$50 which constitutes no real subsidy on the chip cost and does not fully cover the people involved in delivering the service.

We are going to explore the accuracy of predicting animals from some minor breeds, as this may be higher than predicted from theory, due to strong relatedness within the breed. This will also involve genotyping more progeny from these minor breeds.

The first 700k genotypes have been returned from Geneseek and we are working on getting the samples to Geneseek (or using existing 'left over' samples at Geneseek) for the remainder of the set of 950 tests that have been planned. Data analysis is expected to be well underway before the end of 2013.

We are currently reviewing the parentage test service and the parent assignment algorithm, and will document carefully under what circumstances the parent assignment rates are impaired, e.g. with small sample sizes or closely related candidate parents. Overall, the assignment rate is very good and is close to 100%.

The CRC recently held a very successful workshop with breeders involved in the pilot projects. The total number of participants was 56, including researchers and attendees from the Sheep CRC.

Lu Hogan has developed a plan with Sheep Genetics on industry support and training, with components including development of modeling and description of case studies, an intensive training of consultants, and development of extension material.



Image: Justin Hoad condition scoring ewes at the Information Nucleus site, Kirby Farm, UNE, Armidale

## SHEEP CRC UPDATES

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ParaBoss is a suite of three products developed for the management of blowflies, worms and lice. The WormBoss, FlyBoss and LiceBoss websites are sources of detailed management information and regional programs that will assist in managing the major parasite risks for sheep. They have been developed by expert panels of parasitologists and veterinarians from across Australia.

To subscribe to ParaBoss go to 'Managing Subscriptions' at the bottom of the Homepage or subscribe via, FlyBoss, LiceBoss or WormBoss.

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WormBoss, FlyBoss and the Integrated ParaBoss site were developed by the Sheep CRC and LiceBoss was developed by Australian Wool Innovation. Meat and Livestock Australia and Australian Wool Innovation are major sponsors.



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## Media Releases

The following media releases have been circulated recently:

- Sheep CRC extension to link carcase value to eating quality
- Genomic revolution to hit 'turbo drive' in Sheep CRC extension bid
- Animal well-being research to drive future sheep productivity
- Paying forward the sheep industry's investment in education - read Dr Sam Clark's story
- EverWhite wool keeps wool whiter for longer
- Producers see information as key for beating worms in sheep

Find a link to all of the 'Latest News' on the Homepage at:  
[www.sheepcrc.org.au](http://www.sheepcrc.org.au)



*Image: Dr Sam Clark is now employed as a Lecturer in Animal Genetics at UNE, Armidale*



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