MLP
Merino Lifetime Productivity Project

Merino Lifetime Productivity Project Newsletter No.7

New England Online Field Day

The 2020 MLP New England Online Field Day was launched on August 13 as a webinar and website with both components now available for Industry's ongoing reference and interest.

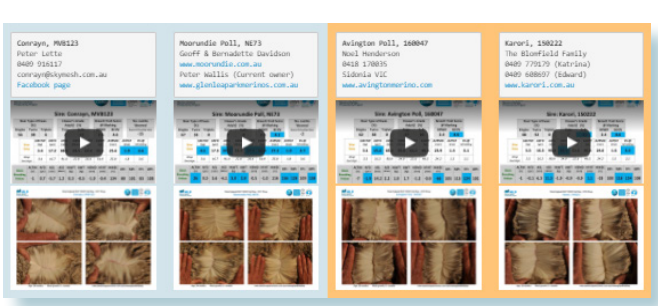
Sheep Connect NSW hosted the webinar with presentations from the New England site and the MLP project team. The field day website is hosted by AMSEA and can be directly accessed via bit.ly/nemlpfd. The website now has a link to the webinar recording so both components remain available.

On the website the New England MLP ewes can be viewed in their sire group videos, with close-up wool images available and all their project results. A suite of supporting videos plus associated CSIRO research presentations are also available - it's a great session for a rainy day.

Webinar attendees and website visitors have come from across the globe with the very positive feedback including appreciation of the access from interstate locations.

MLP quick facts

- The Australian Wool Innovation (AWI) funded MLP project is a $8m (plus $5m from partners), 10-year partnership between AWI, the Australian Merino Sire Evaluation Association (AMSEA), nominating stud Merino breeders and site hosts.
- The MLP project runs at five sites where sire evaluation trials operate for the first two years and then continue tracking performance of ewe progeny as they proceed through four to five joinings and annual shearings.
- **Balmoral, VIC** **Host:** Tuloona Pastoral
  Committee: Balmoral Breeders Association
  Pingelly, WA **Host:** Murdoch University / UWA
  Committee:
  Federation of Performance Sheep Breeders (WA Branch)
  MerinoLink, Temora NSW **Host:** Moses & Son
  Committee: MerinoLink Inc.
  Macquarie, Trangie NSW **Host:** NSW DPI
  Committee: Macquarie Sire Evaluation Association
  New England, NSW **Host:** CSIRO
  Committee: New England Merino Sire Evaluation Association
- A full suite of assessments will be undertaken during the MLP project including visual trait scoring, classer gradings, the objective assessment of a range of key traits and index evaluations.
- A unique and extensive dataset will result and be used to enhance existing Merino breeding and selection strategies, for both ram sellers and buyers, to deliver greater lifetime productivity and woolgrower returns.



Left: Field Day website excerpt. **Above:** Excerpt of sire page showing sire details, ewe inspection videos and wool images - available for all New England sires. ***Images:*** ***bit.ly/nemlpfd***

Balmoral Breeders Tuloona Pastoral · Murdoch University · The Federation of Performance Sheep Breeders Western Australia (Inc) · The University of Western Australia · Moses & Son · bluechip livestock · MerinoLINK · NSW Department of Primary Industries · Macquarie · CSIRO · New England Merino Sire Evaluation Association

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Ram mating success insights - An MLP Add-On

The MLP project has created opportunities for Add-On research projects. One such project is happening at both the Balmoral and Macquarie sites and is exploring if better prediction of ram mating success can be achieved through extensive pre-joining physical examination and semen screening.

The work commenced in 2019 at Balmoral, led by Andrew Whale and Lexie Leonard from Livestock Logic and has since extended to the Macquarie site involving Tim Gole of For Flocks Sake and Jill Kelly from Central West LLS.

Each year the MLP F1 ewes are joined to syndicates of Merino sires and DNA parentage tests are used to allocate sire and dam to their progeny. Results show that some sires in the syndicates are consistently good at getting ewes in lamb, whilst others are consistently bad.

The Add-On project sees race-side pre-joining inspections of the sires capturing scrotal circumference, testis tone, liveweight, condition score, fat score, age, teeth alignment, feet condition and gait. Semen is assessed for colour, density, mass activity, percentage live and motility. The semen samples are then sent off for more extensive morphology testing.

Rams deemed unsuitable for joining via assessment were added to each syndicate in addition to the number of rams required for joining. Progeny numbers per sire will then be compared with the results of the physical and semen testing to determine if they were able to explain the range in progeny performance.

Andrew Whale explains the rationale behind the work,

"We are involved in extensive pre-joining physical and semen examination of bulls but the practice is not routinely carried out in sheep operations".

"Essentially we are adding two extra steps in the routine pre-joining ram assessment. The first involves the physical palpation of testes by experienced operators, many testicle problems are subtle and easily missed if not palpated".

"The second step involves a semen analysis race side and then more extensive testing in the lab. The race-side screening helps us determine what percentage of the sperm are swimming forward and alive. The lab-based testing determines what percentage of the sperm are normal."

"From this we get a really good idea of the percentage of the sperm that are both swimming forward plus anatomically normal and fit for fertilisation to occur."

"Work done with Bos Indicus cattle showed a positive correlation between better semen morphology and improved fertility in the daughters of these sires. If this relationship is true for sheep then it will be a good approach for also improving conception rates in sheep".

At Balmoral in the first year of the Add-On, the sires joined to the MLP ewes were categorised as *fail* (6 sires out of 26), *borderline* (12 sires) or *pass* (8 sires). The average number of progeny per sire within these categories was 15, 51 and 72 respectively.

While the first year of results from Balmoral are encouraging, a second year of assessment is underway to create a larger dataset and confidence in the results. Meanwhile at the Macquarie site, their first year of results are currently being analysed and a second year of assessments is planned.

Although reproduction success is largely driven by the ewe, having the rams in good condition with healthy semen optimises mating outcomes. For commercial growers these indicators of mating success would be valuable if available for ram purchasing decisions.

Look out for project updates in future MLP newsletters.


Macquarie pre-joining sire inspections with Jill Kelly (left) and Tim Gole (right), July 2020. ***Image credit: Kathryn Egerton-Warburton, NSW DPI***

Around the sites

Balmoral

The season at Harrow continues to be exceptionally good with feed getting away and 408mm of rainfall already recorded for the year.

Septembers lambing went well with minimal ewe losses. Tagging was completed on September 28 and 29 with a total number of 1426 lambs processed. A tagging rate of 116% was recorded which is up from the 98% recorded in the previous year.

Balmoral's 2020 drop F2 lambs in for tagging, September 2020.
Image credit: Scott Davis, DATAMAS

Pingelly

The site has received patchy rainfall with 335mm for the year and the hot weather arriving unseasonally early.

Lambs were weaned on September 29. The 2016 drop ewes weaned 457 lambs from 358 ewes joined giving a weaning rate of 128% with lambs averaging 29.1kg. The 2017 drop ewes weaned 587 lambs from 545 ewes joined giving a weaning rate of 108% with the lambs averaging 26.4kg. The 2016 drop ewes averaged 79kg at CS 3.3 and 2017 drop ewes averaged 71kg and CS 3.0.

Pingelly's 2020 drop F2 lambs at weaning, September 2020.
Image credit: Bronwyn Clarke, Murdoch University

MerinoLink

The site has received close to 500mm of rainfall in 2020. Jack Mann commenced as the farm manager in August. Jack is studying Ag.Science remotely and originally from a commercial wool growing property at Rylstone, NSW.

Weaning took place on September 2. The 2016 drop ewes averaged 76kg at CS 3.0 and the 2017 drop also averaged 76kg at CS 3.2. 761 lambs were weaned, averaging 28.6kg, suggesting an overall weaning rate of 106%. Classing and midsides took place in September / October ahead of the inspection day.

RSVP essential for the MerinoLink 2020 MLP Inspection Day. Information and registraion via bit/ly/merinolinkrego

Macquarie

The site has good levels of feed on offer with 538mm of rainfall to mid-September, when the hot weather arrived.

An early post weaning assessment on September 15 saw the F2 weaners sitting at 38.5kg up from 30kg on August 4. The F1 ewes were also weighed with the 2017 drop averaging 79kg up from 73kg at weaning and the 2018 drop ewes averaging 72kg up from 66kg at weaning. A weaning rate of 104% was achieved. Sampling, classing and shearing is scheduled for October.

Macquarie F1 ewes in for functional classing, August 2020.
Image credit: Kathryn Egerton-Warburton, NSW DPI

New England

Ewes went into lambing plots on August 17 with the 2017 drop single bearing ewes averaging 65kg and CS 3.5 and the twin bearers averaging 68kg and CS 3.3. The 2018 drop single bearing ewes averaged 55kg and CS 3.2, while the twinners averaged 62kg and CS 3.2. Lambing started at the beginning of September with CSIRO funding lambing rounds involving weighing and tagging at birth. Lambing is proceeding well and due to finish in early October.

New England 2017 Drop ewes receiving winter feed, pre-lambing, July 2020. ***Image credit: Emma Grabham, AMSEA***

Profile Series: Meet the MLP Site Managers
Bronwyn Clarke - Pingelly, Western Australia

The MLP Site Managers profile series continues in this newsletter. This edition features Bronwyn Clarke of Murdoch University, who is Pingelly's Site Manager. Murdoch manage the research segment at Pingelly while the University of Western Australia manage the farm.

Bronwyn's ubiquitous 'selfie' with her ewes.

Bronwyn brings her extensive organisational experience and network to the management of the Pingelly MLP site. With a background in Merino genetics, experience across agricultural extension networks and her philanthropic non-executive roles, Bronwyn draws together a geographically spread site committee at a site involving multiple partners.

Where has your career path taken you?
BSc (Wool & Pastoral) at UNSW followed by a PhD at UNE examining the use of genetic markers in genetic evaluation of Merino sheep. Bronwyn worked in on-farm genetics extension and sheep breeding research at the WA Department of Agriculture then private consulting across Australia and New Zealand. Her current position is as a Research Fellow in Animal Science at Murdoch.

What's a highlight of your role as Pingelly's Site Manager?
Seeing the reproduction data coming out of the Pingelly MLP flock plus observing the industry interest in field days and keeping up with the Pingelly's results each year.

How would you describe your site and it's ewe base?
Pingelly's ewe base are described as large framed, plain bodied, highly fertile with moderate wool cut. Over the last five years there has been a large emphasis on genetic fat, growth and muscling whilst maintaining wool cut / micron. The ewes are run at the UWA Future Farm 2050 "Ridgefield", Pingelly, owned and managed by UWA. The ewe flock is stocked at approx. 10DSE/ha, averages 5 kg of 19 micron wool and has a weaning percentage of between 100-115%.

Where are Pingelly's ewes up to in their lifetime?
The 2016 born F1 ewes have now lambed for the third time, they have four fleece measurements and been visually classed four times. The 2017 ewes are one year behind.

What makes the Pingelly site unique?
Our location – we are the only site on the western half of Australia representing a Mediterranean climate.

What is Murdoch University's particular MLP interest?
The economic impacts of efficiency and differences between sire groups (using the F1 wethers from Pingelly), the bipaternal information from natural matings and DNA pedigreeing F2 progeny plus the economic and genetic impact of birth/rear type of F1 ewes

What's the most important activitiy of the year at Pingelly?
Lamb tagging!

Bronwyn notes:

'Repeat lambing information across the ewe's lifetime, combined with wool production, is what the MLP is all about.'

What's the most interesting activity of the year?
Visual classing and wool sampling prior to shearing each year. This is a great opportunity to see all the ewes, see how they are aging and how they are being classed by the professional classers as well as to get a good look at the different wool types in the trial.

And the biggest challenge?
Distance for entrants, site committee and Murdoch University staff – Pingelly is a two hour drive east of Perth. There is 730 km between some site committee members.

Bronwyn's top tips for collecting quality data:
Use the same people for the same jobs each year. They have experience and work out ways to improve each time (as well as provide consistent data). Plus, be prepared for anything– it's too far back to the office if you forget something.

Click image for Pingelly 2020 field day information or visit ***wool.com/mlp***

Further information

Download MLP Reports from www.merinosuperiorsires.com.au/mlp-project-reports
Feel free to contact the Site Managers, Project or AMSEA staff who are listed in reports for assistance with interpreting reported results.

Subscribe to the MLP quarterly newsletter at https://go.wool.com/mlp-subscription

Contact MLP Project Manager Anne Ramsay on 0400 368 448

The Merino Lifetime Productivity Project is being undertaken in partnership between the Australian Merino Sire Evaluation Association Incorporated (AMSEA) and Australian Wool Innovation (AWI). AMSEA and AWI would like to acknowledge those entities who also contribute funding, namely Woolgrowers through sire evaluation entry fees, site hosts, site committee in-kind contributions, and sponsors of AMSEA. A special acknowledgement is also made to the Australian Government who supports research, development and marketing of Australian wool.

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