\$5 million from project partners), 10-year venture between AWI, the Australian Merino Sire Evaluation Association (AMSEA), nominating stud Merino breeders and site partners.

- Balmoral, Vic Partner: Tuloona Pastoral Committee: Balmoral Breeders Association
- · Pingelly, WA Partner: Murdoch University / UWA Committee: Federation of Performance Sheep Breeders (WA Branch)
- MerinoLink, Temora, NSW Partner: Moses & Son Committee: MerinoLink Inc.
- Macquarie, Trangie, NSW Partner: NSW DPI Committee: Macquarie Sire Evaluation Association
- New England, NSW Partner: CSIRO Committee: New England Merino Sire Evaluation Association

The MLP project is tracking the lifetime performance of 5,700 ewes as they proceed through four to five joinings and annual shearings.

A full suite of assessments will be undertaken including visual trait scoring, classer gradings, objective assessments 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.

To stay up to date with the latest MLP findings, visit www.wool.com/ MLP. Subscribe to MLP updates via www.merinosuperiorsires.com.au/ contact-us

Pingelly's MLP ewes just prior to lambing, June 2021. PHOTO: Richard McKenna.

As the MLP project continues in its collection of lifetime data, reproduction results to date provide a preliminary indication of the impact of various ewe culling strategies on flock reproduction rate. At the completion of the project, the full MLP reproduction records will be utilised in a comprehensive economic analysis to compare alternative breeding and selection strategies and the impacts on whole flock productivity and profitability.



Ewes and lambs at MerinoLink, July 2021. PHOTO: Marty Moses



Balmoral's MLP ewes lining up for pregnancy scanning, July 2021. Visible dark rib line is vegetable oil residue from EMD/FAT scanning. PHOTO: Tom Silcock

o date, data has been collected across three MLP sites for the ewes through their maiden, second and third reproduction cycles. For this data-to-date snapshot, the 2016 drop ewes at the older MerinoLink, Balmoral and Pingelly sites are presented along with potential flock reproduction outcomes calculated by selecting ewes based on their reproduction performance alone. The MLP project retains all ewes, enabling the impact of applying different selection approaches and the resulting effect on flock reproduction rates to be explored.

At MerinoLink, 308 ewes have been joined as maidens and then again at two subsequent joinings. They averaged 106 lambs for every 100 ewes joined across these three years, or 106% lambs weaned/ewes joined (LW/EJ). Balmoral joined 724 ewes and Pingelly 357 ewes as maidens, and then again for two subsequent joinings, with Balmoral averaging 94% LW/EJ and Pingelly 114% LW/EJ.

Using the reproduction data available on these ewes, the following selection options were applied to determine the impact of the culling on the flock reproduction rate, or LW/EJ:

- 1. Remove scanned dry maidens (Dry Maiden)
- 2. Remove lambed and lost as maidens (L&L Maiden)
- 3. Remove scanned dry at first two joinings (Double Dry)
- 4. Remove lambed and lost at first two joinings (Double L&L)
- 5. Removing ewes that failing to rear a lamb for first two joinings (Failed Twice)

For these three drops (see Table 1 below), the calculated impact of applying the selection strategies is generally small to nil.

The calculated outcomes presented here are based on just three lambings for three of ten MLP drops and have not been analysed for statistical differences.

These early indications will be worked through for all ten MLP drops from the five sites during the project's full economic

analysis. Whole of project analyses and modelling is set to commence in late 2021 and will consider the full range of industry factors influencing selection and culling decisions such as market conditions, the availability of replacement ewes, the influence of age and pregnancy status on key production traits, and stocking rates. This economic analysis work will look to optimise whole flock productivity and profitability, answering industry questions for both ram sellers and buyers.

More information

For more details about the MLP analysis visit www.wool.com/MLP.

2021 FIELD DAYS

MerinoLink - 12 October 2021

Pingelly - 22 October 2021

For more information visit www.wool.com/MLP

Table 1. Ewe retention and removal options with the calculated impact on flock reproduction rates, or lambs weaned per 100 ewes joined (LW/EJ) across three of the MLP sites based on the first three years of reproduction results.

	MerinoLink (308 maiden ewes joined)		Balmoral (724 maiden ewes joined)		Pingelly (357 maiden ewes joined)	
Selection approach*	Number of ewes removed	Flock lambs weaned/ewes joined (%)	Number of ewes removed	Flock lambs weaned/ewes joined (%)	Number of ewes removed	Flock lambs weaned/ewes joined (%)
No culling		106		94		114
Dry Maiden	53	111	99	95	21	115
L&L Maiden	20	105	110	94	35	114
Double Dry	25	107	17	95	5	114
Double L&L	2	106	27	94	3	114
Failed Twice	33	107	68	95	12	114

^{*}Ewe mortalities and welfare culls have been excluded from the calculations.

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