# MLP
## Merino Lifetime Productivity Project

# What's the Merino Lifetime Productivity Project all about?

**Understanding and maximising lifetime performance is critical to increasing productivity and profits for woolgrowers.**

The Merino Lifetime Productivity (MLP) project has been designed to capture lifetime data from diverse environments, genetics and Merino types to help us better understand and deliver lifetime performance outcomes for the Australian Merino industry.

The ewe progeny from 166 industry sires (known as F1 ewes) will be annually wool sampled, visually scored, fleece and body weighed, carcase scanned, faecal sampled and classed by two independent classers. The F1 ewes will be joined to Merino sires from 18 months of age and all reproduction data will be recorded until they are 5-6 years of age.
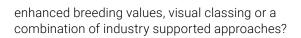
The project sires are selected to represent all breeding philosophies including breeding value trait leaders, high performance industry impact sires, major show winners and representation from all wool and skin types.

The resulting comprehensive dataset will fill important data gaps and allow the industry to learn more about the lifetime relationships between wool, carcase, disease resistance and fertility.

The data will be used to better understand how current selection approaches relate to lifetime performance, and how they might be enhanced to deliver better outcomes. We may also see the development of new selection tools or validation of existing approaches.

The MLP project is an opportunity to answer many of industry's questions in relation to selection and lifetime performance, such as:

- Is it possible to select for lifetime productivity at a young age using breeding values, genomically enhanced breeding values, visual classing or a combination of industry supported approaches?

- What is the impact of selecting for wool, growth, reproduction, welfare and carcase traits on the productivity of Merinos over their lifetime?

- Why do some animals consistently perform year in and year out, while others fade with time?

- Are there new ways to better predict superior lifetime performance?

These questions and many more will be answered by the project. To keep up to date visit the project website, look for regular articles in Beyond the Bale and subscribe to the AMSEA mailing list. More details can be found at **www.wool.com/MLP.**

## Quick facts

- The Australian Wool Innovation (AWI) funded **Merino Lifetime Productivity (MLP)** project is a $7m (plus $5m from partners), 10-year partnership between AWI, the Australian Merino Sire Evaluation Association, nominating stud Merino breeders and site hosts.

- The project aims to increase the understanding of the genetics, and economic interactions, across a diverse range of Merino types delivering high quality wool, lambs and meat through life.

- The MLP project runs at five sites where sire evaluation trials operate for the first two years and then continue to track the performance of the ewe progeny as they proceed through four to five joinings and annual shearings.

- A full suite of independent visual classing and productivity traits will be assessed annually.
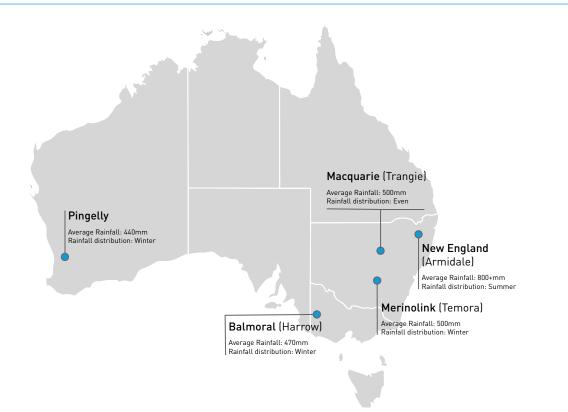
MERINO Superior Sires

awi
Australian Wool Innovation Limited

# Get to know the sites

This large and positive industry collaboration is made possible through the passion and enthusiasm of the five participating sire evaluation committees and host sites.

| SITE | HOSTS | EWE BASE | LAMBING L SHEARING S | SITE CHAIR SITE MANAGER |
|---|---|---|---|---|
| **Balmoral,** Harrow, Vic | Balmoral Sire Evaluation Association & Tuloona Pastoral Co | 17.2um, fine wool base, selecting for growth, fertility and wool cut | L: August S: February | **Mark Bunge** M: 0409 962 248 **Tom Silcock** M: 0419 882 239 |
| **MerinoLink,** Temora, NSW | MerinoLink & Marty Moses | 18um, previous sire evaluation progeny, and studs with ASBVs | L: June S: March | **Richard Keniry** M: 0427 878 541 **Sally Martin** M: 0400 782 477 |
| **Pingelly,** WA | Yardstick Sire Evaluation Association & Murdoch University & University of WA | 19.5um, meaty Merino ewes | L: June S: April | **Brett Jones** M: 0428 323 012 **Bron Clarke** M: 0418 957 293 |
| **New England,** Armidale, NSW | New England Merino Sire Evaluation Association & CSIRO | 17um, ultra-fine flock | L: September S: July | **Duncan Lance** M: 0447 297 135 **Jen Smith** Ph: 02 6776 1381 |
| **Macquarie,** Trangie, NSW | Macquarie Sire Evaluation Association & NSW DPI | Two types, 19-21 um, Centre Plus Poll & Towalba bloodlines | L: May S: October | **Matthew Coddington** M: 0428 635 386 **Kathryn Warburton** M: 0429 943 708 |

**Macquarie** (Trangie)
Average Rainfall: 500mm
Rainfall distribution: Even

**Pingelly**
Average Rainfall: 440mm
Rainfall distribution: Winter

**New England** (Armidale)
Average Rainfall: 800+mm
Rainfall distribution: Summer

**Merinolink** (Temora)
Average Rainfall: 500mm
Rainfall distribution: Winter

**Balmoral** (Harrow)
Average Rainfall: 470mm
Rainfall distribution: Winter

# Sire listings by site and year of drop

| BALMORAL 2015 | BALMORAL 2016 |
|---|---|
| Billandri Poll, 130087 | Centre Plus Poll, 707115 |
| Bogo, 111424 | Glen Holme , 141077 (Dohne) |
| Bundaleer Poll, 13V741 | GRASS Merino, 142194 (R4) |
| Bundilla, 111265 | Greendale, 120012* |
| Centre Plus Poll, 207316 | Greenfields Poll, 140345 |
| Darriwell, 130941 | Greenland, 2.366 |
| Glenpaen, 120042 | Hannaton Poll, 120046 |
| Greenfields Poll, 130599 | Hazeldean, 11.3542 (Hugh) |
| Hazeldean, 11.43 | Kiandra Poll, 140757 |
| Kurra-Wirra, SR5681 | Kooringal, 130519 |
| Leahcim Poll, 090918   L* | Kurra-Wirra, SB5585 |
| Leahcim Poll, 123153 | Leahcim Poll, 090918* |
| Merinotech WA Poll, 100081 | Melrose, 12UGB060 |
| Mokanger, 120092 | Mumblebone, 130389 |
| Moojepin, 100248   L | Mumblebone, 140026 |
| Mumblebone, 130389 | Nerstane, 100919 |
| Mumblebone, 130850 | One Oak No.2, R56* |
| Nareeb Nareeb, 130380 | Stockman Poll, 090853 (Stilts) |
| Nerstane, 130467 | Terrick West Poll, 122220 |
| One Oak No.2, R56   L* | The Mountain Dam, 11/ESA004* |
| Roseville Park, 140019 | Trefusis, 110482 |
| The Mountain Dam, 11/ESA004 | Tuckwood Poll, 131026 |
| Tuckwood Poll, 121021 | Wallaloo Park Poll, 120912 |
| Yalgoo, 120043 | Woodyarrup, 120175 |
| Yiddinga, 130374 | Yiddinga, 141989 |

| PINGELLY 2016 | PINGELLY 2017 |
|---|---|
| Billandri Poll, 130641 | Anderson Rams, 140474 |
| Boolading Blues Poll, 120708 | Barloo Poll, 140027 (Eureka) |
| Claypans Poll,  130597 | Billandri Poll, 151280 |
| East Mundulla, 090137 (Jonty) | Coromandel Poll, 130660 |
| Ejanding Poll, 145096 | Cranmore, 13.10 |
| Haddon Rig, 2.715 | Edale, 10Z266K |
| Hazeldean, 11.43* | Ingle Poll, 150087 |
| Ingle Poll, 130387 | Mianelup Poll, M00540 (Expo) |
| Leahcim Poll, 090918* | Moojepin, 120652 |
| Merinotech WA Poll, 100081* | Moorundi Poll, NE73 |
| Moojepin, 140377 | Neearra Poll, 110264 |
| One Oak No.2, R56* | Range View Poll, 5-680 |
| Rhamily Poll, 110330 (Benny) | Trigger Vale Poll, 140477* |
| West Plains Poll, 110004 (Mercenary) | West Plains Poll, 110004 (Mercenary)* |
| Wyambeh Poll, 140141 | Woodyarrup, 150329 |

| MERINOLINK 2016 | MERINOLINK 2017 |
|---|---|
| Bella Lana, 130296 | Bundilla Poll, 140055 |
| Boyanga, 145112 | Centre Plus Poll, 407185 |
| Glen Donald, 120014 | Collinsville Poll, 130545 (Apollo)* |
| Greendale, 120012 | DT Kenilworth, WH13017 |
| Leahcim Poll, 090918* | Greendale, 140141 |
| One Oak No.2, R56 * | Lachlan Merinos Poll, 015305 |
| Pastora Poll, 082893 | Leahcim Poll, 132624 |
| Poll Boonoke, 120020 | Tallawong, 150280 |
| Pooginook Poll, 140632 | Toland Poll, 151058 |
| Roseville Park, 140611 | Trefusis, 150282 |
| Trigger Vale Poll, 140477 | Trigger Vale Poll, 140477* |
| Wattle Dale, 140754 | Wallaloo Park Poll, 150422 |
| Wurrook, 130149 | West Plains Poll, 110004 (Mercenary)* |

| MACQUARIE 2017 | MACQUARIE 2018 |
|---|---|
| Centre Plus Poll, 707115 * | Anderson Rams, 150266 |
| Collinsville Poll, 130545 (Apollo) | Centre Plus Poll, 707115* |
| Darriwell, 130941 * | Charinga, 130240 (Doc) |
| GRASS Merino, 122190 (P47) L | Glen Donald, 120014* |
| Gullen Gamble Poll, 120018 | GRASS Merino, 141924 (R15) |
| Hazeldean, 13.4936 | Gullen Gamble Poll, 14189 |
| Kerin Poll, 151911 | Haddon Rig, 2.715* |
| Moojepin, 120652 * | Hazeldean, 11.3542 (Hugh)* |
| Mumblebone, 151367 | Kerin Poll, 160137 |
| Roseville Park, 132933 | Langdene, 160950 |
| Trigger Vale Poll, 140477 * | Lewisdale Poll, 150010 (Monty) |
| Wanganella, 130816 | Orrie Cowie, 140050 (Trojan) |
| West Plains Poll, 110004 (Mercenary)* | Roseville Park (Poll), 150039 |
| Wilgunya, 121224 | Stockman Poll, 130707 (Pioneer) |
| Willandra Poll, 140030 (Des) | Wanganella, 150610 |
|  | Willandra Poll, 160001 |

| NEW ENGLAND 2017 | NEW ENGLAND 2018 |
|---|---|
| Connemarra Poll, 140257 | Alfoxton, 150430 |
| Conrayn, MVB123 | Avington Poll, 160047 |
| Cressbrook, 140055 | Bungulla, 160350 |
| Egelabra, HEK 1.36 | Clovernook Poll, 160095 |
| Grindon, 150017 | Cressbrook, 140055* |
| Karori, 140188 | Eilan Donan, Harvey (5145) |
| Miramoona, 140012 | Europambela, 120101 |
| Mirani, 120021 | Hillcreston Park Poll, 110143 |
| Moorundi Poll, NE73* | Hilltop, HT Poll 156 |
| Nerstane, 150073 | Karori, 150222 |
| Petali Poll, 150697 | Nerstane, 150073* |
| Trefusis, 150282* | Petali Poll, 160849 |
| Trigger Vale Poll, 140477* | Tallawong (Poll), 150280* |
| West Plains Poll, 110004 (Mercenary) L* | Wurrook, 130149* |
| Yalgoo, 150313 | Yalgoo, 160070 |

L= Funded links to sire evaluation,
* = between MLP site linkage

# Lifetime annual recording

For the first two years the sites operate like a standard sire evaluation following the rigorous protocols to independently assess both the measured and visual performance of a sire's progeny. At the conclusion of the standard sire evaluation phase (generally once progeny are between 18 to 24 months of age), AWI supports the ongoing measurement and visual assessment of all ewe progeny (F1 ewes) through 4-5 joinings and annual shearings.

| | |
|---|---|
| **Wool Measurements** | Fleece weight, yield, fibre diameter, fibre diameter standard deviation, fibre diameter coefficient of variation, staple strength, staple length, comfort factor and curvature |
| **Growth & Carcase** | Body weight, eye muscle, fat depth and adult ewe size |
| **Health and Welfare** | Worm egg count, faecal consistency, dag, urine stain, breech cover, crutch cover, breech wrinkle, and weaner and adult survival |
| **Visual Wool Traits** | Fleece rot, wool colour, wool character, dust penetration, staple weathering, staple structure, fibre pigmentation, non-fibre pigmentation, recessive black and random spot |
| **Visual Conformation Traits** | Face cover, jaw, legs/feet, shoulder/back, body wrinkle |
| **Classing** | Two classings with independent sheep classers (flock classing and stud classing approach) |
| **Joining, Pregnancy, Lambing** | Sire, dam, pregnancy scanning, number of lambs weaned (fertility, litter size, lamb survival) body weight and condition score (at pre-joining, pregnancy scanning, pre lambing, weaning) |
| **DNA** | Pedigree and genotyping |

The resulting data will be used for a vast number of statistical, economic and genetic analysis to better understand the drivers of lifetime productivity, to better refine existing selection approaches and to identify the most cost effective means to achieve productivity.

# Keep up to date

Individual site reports and the latest in project updates can be accessed via the project website **www.wool.com/MLP**

Annual site field days provide a chance to inspect the F1 ewes first hand. Check the project website for a list of upcoming field days.

# Project contact details

| | | |
|---|---|---|
| **Anne Ramsay** | MLP Project Manager | **0400 368 448** |
| **Ben Swain** | AMSEA Executive Officer | **0427 100 542** |
| **Geoff Lindon** | Program Manager Genetics & Animal Welfare Advocacy | **0427 572 228** |

**www.wool.com/MLP**