MLP DAM & AI SIRE DIVERSITY ACHIEVED

MLP
Merino Lifetime Productivity Project

The Merino Lifetime Productivity (MLP) project is designed to generate a unique Merino ewe dataset that can be analysed to better understand how current selection approaches such as breeding values, indexes, genomic information, and the use of visual selection relate to lifetime performance and how breeding strategies might be enhanced to deliver better outcomes to industry.

The core focus of the project is 5,000 ewes that will be annually assessed for wool production, carcase traits, conformation, visual performance and importantly, annual reproduction performance. The ewes are the product of five differing ewe bases located in dissimilar environments joined to 135 unique and diverse industry sires. **The following stocktake of the project's ewe base, and sire used, emphasises the diversity achieved in the project.**

NUMBER OF SIRES

In total, there have been 168 AI sire joinings to 90 ewes each; 135 individual sires along with 33 joinings where repeat sires were used to provide linkage between years at a site and between the five sites.

SIRE POLL / HORN STATUS

A few sires remain to be genotyped for poll status. The current numbers are:

Poll Status	No.	%
Horn / Horn	53	32%
Poll / Horn	46	27%
Poll / Poll	47	28%
Yet to be tested	21	13%

There are approximately one third true polls, one third true horns and one third carrying both the poll and horn gene.

MERINOSELECT STATUS

MERINOSELECT membership	No.	%
MERINOSELECT	118	70%
DOHNE MERINO	1	1%
Non-MERINOSELECT	49	29%

Through the open nomination process, 30% of the sires selected are from non-MERINOSELECT members.

The Pingelly field day included a description of the sires' progeny.

Presentation at the **MerinoLink field day on 16 March.**

AGE OF AI SIRES

Drop	Current Age	No.	%
2010 and earlier	>8 yo	20	12%
2011-2013	5-7 yo	77	46%
2014-2016	2-4 yo	71	42%

There is a mixture of young and proven sires in the project, designed to reduce selection risk but to also use the latest young AI sires available.

MERINO TYPE

Merino Type	No.	%
Super Fine	20	15%
Fine/Medium	88	65%
Medium	27	20%

There is a balance of sires roughly proportional to the wool types grown in Australia.

SIRE ASBVS

30% of sires did not have ASBVs at the time of selection but as their progeny are assessed, these sires eventually gain Breeding Values. To date, of the 135 unique sires used in the project, 120 sires have ASBVs with a very large diversity. **AWI and AMSEA are grateful to those breeders who entered sires to facilitate the diversity required. See Table 1 on opposite page.**

VARIATION IN EWE TYPES AND ENVIRONMENTS

Site	Location	Ewe Type
New England	Uralla, NSW	Super Fine
Balmoral	Harrow, Vic	Fine
MerinoLink	Temora, NSW	Fine/Medium
Macquarie	Trangie, NSW	Fine/Medium
Pingelly	Pingelly, WA	Meat Merino

There are a diverse range of ewe types and environments, rainfall, temperature, soil types and altitude. There are a range of link sires that have been joined across ewe types and environments. See the sire listing opposite.

THE PROGENY

Five thousand daughters from these diverse foundation ewes and AI sires will be assessed both visually and measured through their young ages and over 4 to 5 years as lambing adults.

Will the high performing daughters at one and two year old be the high lifetime performers?

How were the top lifetime performing ewes assessed as young ewes and what can we learn about selecting the top lifetime performing sheep at young ages. Time will reveal all.

More information
wwww.wool.com/MLP
Episode 30 of AWI's The Yarn podcast at **www.wool.com/podcast**

THE YARN

TABLE 1: RANGE IN PERFORMANCE OF MLP SIRES BASED ON CURRENT ASBVs (APRIL 2018)

TRAIT	ycfw	yfd	yfdcv	yss	ysl	ywt	yfat	yemd	ywec	nlw	ebwr	DPP	MPP	FPP
	%	FD	%	N/Kt	mm	kg	mm	mm		%	Score	Index	index	index
Min	-35	-4.2	-3.7	-7.1	-12.6	-5.9	-2.1	-2.7	-81	-17%	-1.6	64	70	86
Max	44	1.5	2.3	11.7	28.1	14.2	2.8	3.9	130	32%	1.3	250	241	204
Range	**79**	**5.7**	**6.0**	**18.8**	**40.7**	**20.1**	**4.9**	**6.6**	**211**	**49**	**2.9**	**186**	**171**	**118**
Ave	19	-1.3	-0.5	0.1	5.9	5.4	-0.1	0.2	-1	2%	0.0	154	155	144
MS Av*	13	-1.2	-0.8	0.5	6.3	4.2	0.1	0.4	-15	1%	-0.1	138	137	132

* MS Av = MERINOSELECT average.

The trait range, for the traits listed in the table, varies from the top 2% to the bottom 2% of the Merino breed. 10% of sires have a Breech Wrinkle ASBV of -0.8 or less (natural non mules) and 10% of sires a Breech Wrinkle ASBV of +0.8 and higher.

SIRE LISTING BY SITE AND YEAR OF DROP

The final AI joining has just been completed at the New England Site. The full list of Sires in the MLP project is listed in the table below.

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

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)*

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

L = Funded links to sire evaluation

* = Between MLP site linkage

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

FIELD DAYS

The **Balmoral, MerinoLink** and **Pingelly** sites have had recent field days. For their latest results go to www.wool.com/MLP

Upcoming Sheep Inspection Days will be held at **Macquarie** on Wednesday 11th of July and at **New England** on Friday 3rd August.