



The Australian Merino Production Trial 2021 – 2023

Trial Convenor

Craig Wilson and Associates is committed to the ongoing genetic improvement of the Australian Sheep Industry. The company has collected Merino benchmarking data for the past 16 consecutive years on more than 11,000 sheep run in various evaluations and trials run across NSW.

Previous Trials

All trials have been overseen by the New South Wales Department of Agriculture and information from these trials forms a large part of the National Merino Bloodline Performance data published by Australian Wool Innovation and NSW DPI. Critical analysis and reporting is carried out by Sally Martin Consulting an independent sheep consultation business based in Young NSW. Most of Australia's largest woolgrowers have been previous entrants in these trials and all Merino Bloodlines with a significant influence on the national flock have been represented.

Craig Wilson Livestock Wether Trial

2004-2006 Wagga Wagga 27 teams of 15 wethers

2006-2009 Alectown 51 teams of 15 wethers

2008-2010 Taralga 30 teams of 30 wethers

2008-2010 Clyde Agriculture 13 teams of 30 wethers

Peter Westblade Memorial Merino Challenge

2010-2012 Temora 50 teams of 30 wethers

2012-2014 Temora 60 teams of 30 wethers

2014-2016 Temora 50 teams of 30 wethers

2016-2018 Wagga Wagga 50 teams of 30 wethers

2018-2020 Wagga Wagga 40 teams of 30 wethers

Paraway Pastoral Company Wether Trials

2014-2016 Narranderra 8 teams of 30 wethers

2016-2018 Narranderra 10 teams of 30 wethers

Australian Merino Lamb Trial

2020 Wagga Wagga 26 teams of 25 wethers

COMMENCING APRIL 2021

Australian Merino Production Trial

2021-2023 Wagga Wagga & Condobolin



Why you should benchmark your merino flocks' genetics?

Benchmarking provides the entrants with a thorough understanding of the genetic capacity of their merino flock. This is fundamental to having a successful and profitable self-replacing merino sheep breeding business. Environmental and management effects have a very large impact on how merino sheep look and perform. To accurately measure a flock's relative genetic profitability, sheep must be run together over a period of time whilst objectively analysing all traits that can be measured.

Wethers are condition scored and weighed at critical times reflecting typical ewe mating dates to allow comparison between teams for traits that will influence fertility in the entrant's ewe flocks.

Wethers are simply a vehicle to understand the relative genetic merits of an entrant's ewe flock.

What have previous trials told us so far?

The range in relative profitability particularly at Net Profit level demonstrated through these trials continue to highlight the opportunity for entrants to significantly increase the performance of their flock's genetics.

Peter Westblade Memorial Merino Challenge 2010-2020 - Team Comparison - Raw Data												
		2009 Drop - White Tag		2011 Drop Green Tag		2013 Drop - Yellow Tag		2015 Drop - Blue Tag		2017 Drop - White Tag		
	TEAM	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Averages
Age at Shearing		1.5 Yr	2.5yr	1.5 Yr	2.5 yr	1.5 yr	2.5 yr	1.5 Yr	2.5yr	1.5 Yr	2.5 yr	
Months of Wool		12	11	12	11	11	12	12	11	12	11	
Average Fiber Diameter	Team A	18.4	18.7	16.7	18.2	17.9	19.2	17.0	16.2	16.3	18.7	17.7
	Team B	19.9	19.7	18.2	19.6	19.7	20.5	18.9	18.6	18.2	21.0	19.4
	AV	18.9	18.8	17.5	18.8	18.1	19.3	18.0	17.2	16.3	18.9	18.2
	Var.	-1.5	-1.0	-1.5	-1.4	-1.8	-1.3	-1.9	-2.4	-1.9	-2.3	-1.7
Average Clean Wool Weight	Team A	4.4	4.6	3.6	4.1	4.3	5.2	3.7	3.5	3.1	3.4	4.0
	Team B	3.4	3.4	3.0	3.2	3.5	4.3	3.5	3.0	2.8	2.8	3.3
	AV	3.9	3.9	3.4	3.8	4.0	4.9	3.8	3.4	3.0	3.3	3.7
	Var.	1.0	1.2	0.6	0.9	0.8	0.9	0.2	0.5	0.3	0.6	0.7

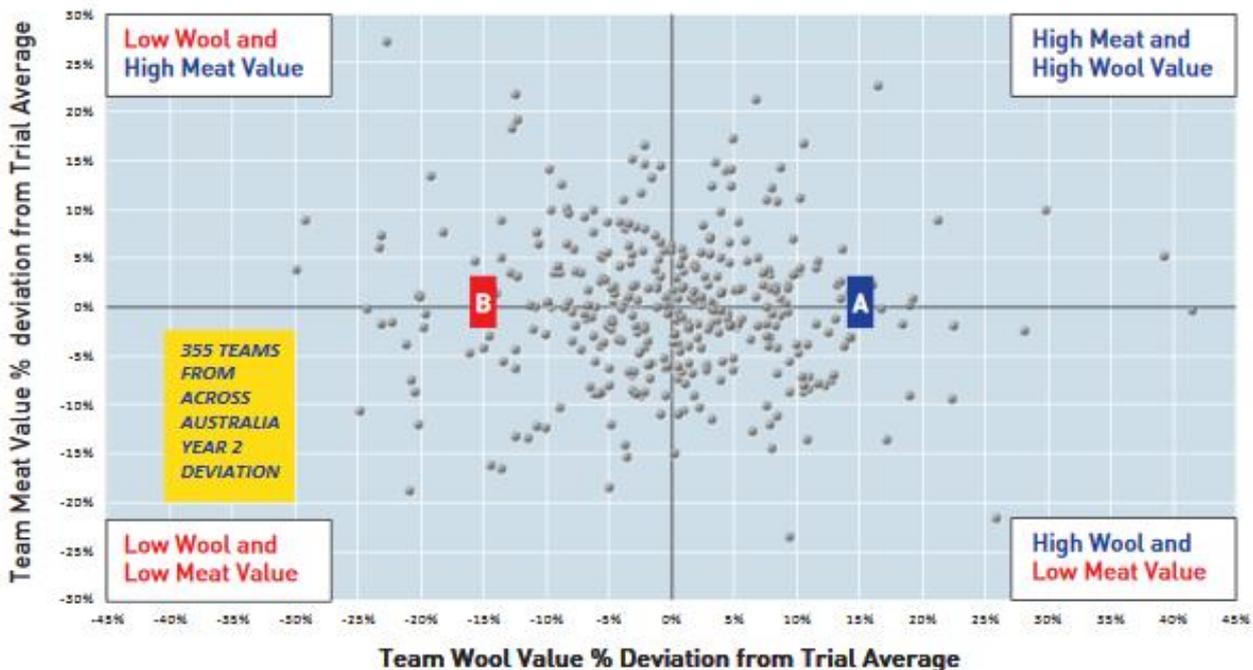
The table above clearly shows the consistency of the measured range of two different entrants flocks genetics over a ten year period. Considering the measurement of five different drops of sheep, the data gives a great level of confidence that the results generated from the trial do truly reflect a flock's relative profitability.

What could this mean to the profitability of my business?

PWMMC 10 Year Production		
10 Year average Wool Value	Gross Income 1 Shearing 5000 sheep	Gross Lifetime Wool Production 5 shearings, 5000 sheep
Team A	\$59.05	\$295,253.20
Team B	\$43.85	\$219,234.20
Var.	\$15.20	\$76,018.99
10 Year average Meat value	Gross Income meat production 1 sheep, sale 5000 sheep	Gross Lifetime meat production 1 sheep, sale 5000 sheep
Team A	\$83.58	\$417,891.69
Team B	\$85.21	\$426,032.07
Var.	-\$1.63	-\$8,140.38
	Gross Income Variance 1 Shearing 1 Sale 5000 sheep	Gross Income Variance 5 Shearings and 1 Sale 5000 sheep
Extra Gross Income	\$67,878.61	\$371,954.59

In a recent article in Australian Wool Innovations (AWI) Beyond the Bale (December 2020) the graph below was presented, showing the per head variation in the second year of assessment from the average for meat and wool values for the 355 wether teams that have been entered into trials co-ordinated by Craig Wilson and Associates

The graph below shows Team A and Team B and their relative merit in comparison to other teams.



How will The Australian Merino Production Trial run?

Each entrant will be required to provide 30 randomly selected wethers.

Location 1 (Eastern Riverina) - S, P, A and R Lamont, Koorringal Horse Stud, Harefield NSW

Location 2 (Western Riverina) - Fletcher International Exports Kiargathur Station, Condobolin NSW

Entrants will be required to nominate the trial location of their choice to enter their 30 wether lambs or decide to enter 15 wethers in both trials. Both trials run at Harefield and Condobolin will be linked by teams that have a proven track history of wether trial performance across many sites and years.

The link teams for across location comparison and to previous wether trials including the Peter Westblade Memorial Merino Challenge (PWMMC), Australian National Field Day and Bookham wether trials as well as contributing to National Merino Bloodline Performance Analysis.

The Australian Merino Production Trial is designed to measure the impact on merino profitability of two separate environment and management systems, providing the opportunity to gain a greater understanding of the effects of dust and vegetable matter on relative clean wool yields and wool prices.

Both linked trials will run for two consecutive shearings in April 2022 and March 2023.

Value to the entrant

The trial will provide commercial or seed stock breeders with an opportunity to evaluate and showcase their flock's performance in key profit areas, across a range of environments and production systems.

Each entrant will receive a comprehensive analysis of their flock's performance for all the traits listed in Table 3 after each shearing. Entrants will be invited to attend field days and seminars where trial teams will be on display and results presented.



Reporting

The results from each site will be reported back to entrants after each assessment shearing and is outlined in Table 2.

Table 2 - Reporting Timetable

Date/Event	Report Generated
Even-up – Induction – 7 th April 2021	List of entrants, locations, details about trial sites
First assessment – April 2022	1 st shearing assessment
Second assessment – March 2023	2 nd shearing assessment – combined with 1 st assessment

Traits to be measured

Table 3 outlines the traits that will be measured within the AMPT.

Table 3 - Traits measured

Liveweight traits

Condition Score (CS)
Induction weight (kg)
1st Assessment shearing body weight (kg)
2nd Assessment shearing body weight (kg)

Wrinkle score

Wool traits

AWEX Identification – style (MF4; MF5)
Bin Line (AAAM; AAAE; AAAC)
Clean fleece weight (kg)
Coefficient of Variation of Fibre Diameter
Colour – Nil, H1, H2, H3
Comfort factor (% > 30 micron)
Fibre Diameter (um)
Fleece rot score – 1 to 5
Greasy fleece weight (kg)
Schlumberg Yield (%)
Standard Deviation (FD)
Staple length (mm)
Staple strength (N/ktex)
Vegetable matter (%)
Washing Yield (%)

Rules and Guidelines

- 1) Teams need to be a commercial self-replacing wool strain of sheep including, Horn, Poll, SRS, Bond, MPM, Mega Merino, Dohne and South African Meat Merino (SAMM).
- 2) The entrant must have bred all sheep nominated, with the wethers carrying the entrants registered ear mark and NLIS PIC tag. The entrant can enter a team of wethers bred from rams purchased from the nominated stud (bloodline source) or those bred to their own rams. A separate category will be set up for studs enabling data to be compared separately to the commercial teams.
- 3) The trial is open to sheep operations from across Australia.
- 4) The trial will commence in April 2021 and conclude in March 2023.
- 5) The trial will accommodate a maximum of fifty (50) teams, each to comprise thirty (30) wethers.
- 6) At the commencement of the trial, all teams will be shorn to standardise wool length (even up shearing). Each team will then be randomly split into two groups of 15 wethers, for those entrants wishing to have their team run in two locations. For entrants that want to only assess their wether team at one location the full team of 30 wethers will remain at the one location.
- 7) Each nominated team must be selected according to the following process:
 - 7.7.1. The Entrant will yard a minimum 90% of his/her 2020 wether drop lambs (born after April 1). A minimum of 300 wether lambs must be yarded.
 - 7.7.2. A nominated trial representative will randomly, draft fifty-four (54) wethers from the above group.
 - 7.7.3. The Entrant and/or their advisor will then select his/her team of thirty (30) from the random group of 54 wethers. The selection of the 30 wethers will be in line with the entrants breeding objectives and will occur without the use of objective data.
 - 7.7.4. Under the supervision of the trial representative, the team of thirty (30) wethers will then be ear-tagged, with two permanent tags.
 - 7.7.5. The Entrant is to liaise with the trial coordinator in their region for the delivery of his/her team of thirty (30) wethers to a central location for trucking to the trial site. All teams must be on-site prior to the even up shearing anticipated to be in the first week of April 2021 and accompanied with a National Sheep Health Statement and National Vendor Declaration (Sheep). If any form of footrot is present in a flock (or suspected), the flock is ineligible to participate in the trial.
 - 7.7.6. Entrants may elect to have teams tagged and delivered at weaning.
 - 7.7.7. Wethers to arrive unshorn at induction, allowing for the even up shearing. Teams shorn prior to 1st January 2021 may be accepted with prior approval.

- 7.7.8. Flocks previously testing positive to Ovine Johnes Disease must show a strong history of Gudair Vaccine use across the whole flock and ensure all wethers in the trial team have been vaccinated with Gudair by 16 weeks of age.
- 7.7.9. At entry to the trial (arrival at location for even-up shearing) and after sheep have passed a full animal health induction, all sheep become the property of Craig Wilson & Associates. Entrants may consider approaching their ram breeder to assist with the cost to supply the sheep.
- 7.7.10. All transport costs will be covered by the owner of sheep at the time when the cost occurred. For example, all transport costs incurred taking the team to the even up shearing will be the responsibility of the entrant. Once the team has passed induction, all costs associated with the trial will be covered by the trial owner.
- 7.7.11. Upon arrival a full animal health induction program will be implemented. Should any individual team fail the initial feet inspection or any other animal health issues deemed unacceptable by the trial induction manager, the team will be removed from the trial and entrants asked to pick up their sheep.
- 7.7.12. Wethers at each site will be run as one mob. This is to ensure all wethers are run under the same conditions. Pasture is the primary source of feed, with supplementation required to maintain liveweight when the condition of the leanest animal falls to condition score 2.

8. Trait Measurement

- 8.1 Prior to shearing, each year a sample of fleece will be taken from the mid-side of each sheep and tested for fibre diameter, coefficient of variation fibre diameter, staple length, staple strength (finance dependent) and washing yield.
- 8.2 Prior to shearing wethers will also be body weighed, scored for condition, fleece rot and wool colour.
- 8.3 Post shearing the wethers will be scored for body wrinkle.
- 8.4 At shearing, all wool from each sheep will be weighed and commercial values will be calculated using long term 3-year average prices.
- 8.5 Commercial wool values will take into account each fleece's tested fibre diameter, staple length, staple strength, yield and wool type (AWEX ID) as determined by independent AWEX-ID accredited wool valuer(s).
- 8.6 Using the fleece values determined, team average results will be calculated each year, by dividing the sum of the individual wool values by the number of wethers present in the team at shearing. The total number of sheep in each team, plus the proportional oddment values will determine the team total value of wool production. If less than 12 sheep in a team of 15 or 24 in a team of 30 remain, the information becomes unrepresentative and the results may be withheld from the public and not published (information will be given to the entrant).

8.7 The value of the carcass in the Merino Production Trial will be estimated in the final year using average body weight and condition score assessments to estimate a dressing percentage multiplied by the 5-year average mutton price.

8.8 Using the carcass values, team average results will be calculated each year, by dividing the sum of the individual carcass values by the number of wethers present, in the team.

The Trial Convenor will be Craig Wilson & Associates.

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Past Trial Reports at

www.craigwilsonandassociates.com.au

Sheep CRC Video of Peter Westblade Memorial Merino Challenge

Link <https://youtu.be/eZSUr8bXGRs>

Charles Sturt University – Livestock Forum 2020

Benchmarking the Merino Industry

Link <https://youtu.be/eix-x5Gj0zM?t=1749>