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AWI is the R&D and marketing organisation for the Australian wool industry.

AWI working for woolgrowers



s the R&D and marketing organisation Afor the Australian wool industry, we proudly work for all Australian woolgrowers. One way that we drive extra value is by collaborating with other organisations. Whether it is MLA on Making More From Sheep and ParaBoss, receiving Commonwealth grants to do vital research, or working with researchers on the full carbon cycle, methane mitigation, wool harvesting innovations and better flystrike solutions. We know we can't do it alone and pooling resources is often the best way to successfully deliver programs.

AWI's role in flystrike management

When it comes to flystrike, AWI provides tools, options and market information to woolgrowers so they can make up their own mind as to how best to manage flystrike on their property. It's not up to AWI to tell any grower what they should or shouldn't be doing; we will support growers' right to make up their own mind.

AWI's Flystrike Extension Program is available to woolgrowers across Australia to improve the lifetime welfare of their sheep, reduce their reliance on mulesing and chemical use, and increase whole farm profitability. While selecting sheep that are less susceptible to flystrike is a key long-term approach to reducing flystrike risk, refer to pages 22–23 of this edition of Beyond the Bale for options on what you can do to prevent flystrike as we head into flystrike season.

On the R&D front, AWI is currently investing in a range of biological control methods for targeting the Australian sheep blowfly. These projects include (1) the release of millions of sterile male blowflies on Kangaroo Island in South Australia to see whether they will suppress the blowfly reproduction rate and population, (2) the use of nanotechnology to develop a tea

AWI CEO John Roberts provides readers with an overview of how AWI is undertaking projects to address some of the key issues faced by Australian woolgrowers.

tree oil biopesticide, (3) the development of a more effective and potent way of trapping sheep blowflies, and (4) research to identify genes and proteins that could be used in the development of future blowfly control strategies.

Market signals between woolgrowers and buyers

As AWI does every six months, we include in Beyond the Bale the latest National Wool Declaration (NWD) declaration rates and the average premiums woolgrowers have received through the auction system for declaring their wool as Non Mulesed (NM), Ceased Mulesed (CM), or Mulesed with Analgesic &/or Anaesthetic (AA) – see pages 60-61. Woolgrowers who sign up to certification schemes generally receive an even higher premium. For further advice on achieving premiums for your wool, contact your wool broker.

Once a woolgrower has completed the NWD, the contents are converted for inclusion in sale catalogues and test certificates, thereby enabling woolgrowers to communicate directly with prospective buyers, processors and retailers; and them send key wool market messages back to woolgrowers. To attract the highest price for their wool, all woolgrowers, regardless of their mulesing status and wool type, should ensure their wool is accompanied by an NWD. Failure to complete an NWD has usually resulted in the wool being discounted. Declaration rates continue to rise; 76.8% of Australian wool was declared on the NWD during 2024-25.

We are also reinforcing the industry's dedication to transparency through the Australian Wool Traceability Hub. It provides a digital platform to track the journey of wool from farm to first stage processor, ensuring a chain of custody and provenance. The Hub will serve as a testament to our collective efforts to maintain the integrity, trust and value that Australian wool is known for worldwide. An Australian wool industryowned and -led initiative, the Hub is available to woolgrowers as well as wool sellers and buyers.

Restocking following better seasonal conditions

Significant areas of the country have been affected for some time by extreme weather conditions. However, there has recently been some better seasonal conditions across many wool-growing regions of Australia, and the Bureau of Meteorology forecasts above median rainfall across most of the eastern half of Australia for the three month period September to December.

As we go into this spring, many woolgrowers will be considering restocking which is good news. However, if you're considering bringing stock onto your property remember that it requires appropriate preparation and careful management to ensure the new arrivals don't result in stock and financial losses. See pages 30–31 for more information.

AWI's new Strategic Plan 2025-28

AWI has published its new Strategic Plan covering the three financial years that began on 1 July 2025. The Plan was developed in consultation with woolgrowers and wool industry bodies and reflects the key R&D and marketing priorities that they have told us are important to them. Further details about AWI's planned investments during the current financial year are contained in AWI's 2025–26 Annual Operating Plan. See pages 4–5 overleaf for more information.

AWI Annual General Meeting

The AWI 2025 AGM will be held on Friday, 14 November in Sydney. This year is a director election year. Only AWI shareholders can vote at the AGM. Formal notice and meeting papers will be sent to AWI shareholders in October. AWI shareholders who are unable to attend the AGM in person will be able to view the AGM proceedings via webcast. See wool.com/agm for details.

John Roberts

Chief Executive Officer Australian Wool Innovation

AWI's new threeyear Strategic Plan

In June, AWI released its new three-year Strategic Plan after consulting widely with woolgrowers and their representatives to ensure industry views and priorities are incorporated into the plan.

AWI's new three-year Strategic Plan.

WI's new Strategic Plan, effective from 1 July A2025, defines the company's strategic direction and targets for the three financial years 2025-26 to 2027–28. It outlines the main wool industry R&D and demand creation activities in which AWI will

positively impact their profitability and long-term

"Analysis of enterprise profitability consistently

source of income, especially in an increasingly variable

climate. Focusing on productivity improvements in a wool-growing enterprise is more likely to increase profits than moving to a different enterprise.

"AWI subsidiary Woolmark will engage with

"We will continue to take advice from the WICP

and WCG on areas of expenditure both in research and

demand creation that they believe will deliver positive

"Australian woolgrowers are the best in the world.

They choose a challenging and rewarding industry to

invest in. As a woolgrower, I know the hard work and

dedication needed to get through the hard times and

reap the benefits that growing wool continues to deliver.

"I am proud of AWI's R&D and demand creation

investments and I am confident that we can achieve even more for Australian woolgrowers during the next

outcomes for Australian woolgrowers.

three years and into the future."

and inspire the world's leading fashion and textile manufacturers, brands and retailers to include wool in

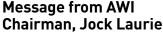
shows the value of wool sheep in a farming business, providing production options as well as a reliable

sustainability," he said.

their collections.

invest on behalf of Australian woolgrowers – see the opposite page for a summary.

In preparing the Strategic Plan, AWI considered the challenges and opportunities facing the Australian wool industry, and the strategic plans of the broader Australian wool and agricultural industries, such as the Wool 2030 Strategy and the Sheep Sustainability Framework.



"In the post-farm area, AWI will partner with leading manufacturers, brands and retailers across AWI Chairman Jock Laurie says the three-year Strategic Plan looks to the future of the Australian wool industry with confidence. we will continue to promote wool's many benefits "AWI's on-farm focus will be on ways to help over fossil fuel derived fast fashion. woolgrowers increase their productivity, which will

> "Despite the challenges that the industry faces, I look forward to the AWI activities outlined in this Strategic Plan providing a valuable contribution to a productive and profitable wool industry."

important to them, the Strategic Plan has also been shaped by the result of WoolPoll 2024 and the broader financial position of the company. "Given the limited reserves available to the

company, during the next three years AWI must largely rely only on what it receives in revenue each year. AWI operates in a lean, efficient and transparent manner, but just like any business with a reduced income, we have to make tough choices about which projects and activities we can invest in," John said.

Message from AWI CEO, John Roberts

AWI CEO John Roberts says as well as reflecting the

priorities that woolgrowers have told AWI are most

"On-farm, important areas of investment include genetics, reproduction and nutrition, animal health, and wool harvesting, all designed to deliver improved productivity and profitability.

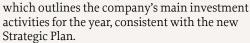
the world to explore new opportunities for Australian wool and carry out joint demand creation campaigns that are cost effective and market focused. In the face of legislative changes to product labelling in Europe,

MORE INFORMATION

wool.com/strategy-2025-28

AWI's Annual Operating Plan for 2025-26

In June, AWI also published its Annual Operating Plan for the 2025–26 financial year,



Details of the progress against the targets in the Annual Operating Plan are published twice-yearly on the AWI website at wool.com/consultation as well as in the AWI Annual Report and the AWI Annual Performance Report.

MORE INFORMATION wool.com/AOP-2025-26



AWI's purpose

To enhance the profitability, competitiveness and sustainability of the Australian wool industry through research, development, extension and demand creation.



AWI's goal

A thriving Australian wool industry.

4 UPFRONT



KEY PRIORITIES 2025-2028

PILLAR 1

GROW DEMAND AND FIBRE ADVOCACY





DEMAND CREATION

It is vital for Australian woolgrowers that there is collective investment of their funds in the marketing of Australian wool to increase demand for the fibre.





FIBRE ADVOCACY - INTERNATIONAL LEGISLATION AND MARKET SHARE

With research showing that only one in three consumers check labels for fibre content before purchasing a garment, AWI aims to boost fibre awareness and emphasise wool's advantages.





PRODUCT INNOVATION

AWI will partner with manufacturers and brands to carry out R&D, technology transfer and commercialisation of new wool processes and product lines.





EMERGING MARKETS

AWI will pursue the development of potential new processing and manufacturing markets for Australian wool to help reduce the risk of relying on a limited number of markets.

PILLAR 2 SUSTAINABLE AND PROFITABLE WOOL-GROWING





RESEARCH, PRODUCTIVITY AND PROFITABILITY

AWI will invest in R&D and extension to help woolgrowers increase their productivity and reduce their costs of production, which are key elements for improving woolgrowers' profitability.





ENVIRONMENTAL AND FINANCIAL SUSTAINABILITY

AWI will progress its Woolmark+ roadmap in response to the increasing consumer and regulatory demands for low-impact products.





WOOL HARVESTING

AWI will continue with its multi-pronged training and technological approach to make wool harvesting easier and more cost-effective for woolgrowers and the industry.

Sutherlands shift back into Merinos

Since Tom Sutherland returned to the family farm at Wellington in NSW, the Sutherland family has shifted away from crossbreds and been building an efficient, productive and profitable self-replacing Merino flock based on modern dual-purpose Merinos that are designed for today's markets.



Tom Sutherland with the clip at 'Budgalong' near Wellington, NSW, where the Sutherland family runs about 6,600 joined ewes plus ewe lambs, with 3,500 Merinos joined to Merinos.

But looking at the numbers, Tom soon discovered the system demanded a nearperfect performance every single year to remain economically sustainable.

To make it work, they needed to consistently wean about 20% more lambs, hit foetus conversion rates of 90%, and maintain extremely high efficiencies – all while dealing with unpredictable seasons and shifting markets. It meant there was no room for error.

"Every year you had to nail it," Tom said. "And you can't always do that. The environment can change things around. You get a cold snap, a dry spring, or a poor lambing season, and suddenly the KPIs become challenging."

At the same time, crossbred wool prices had collapsed.

With high replacement costs for ewes, expensive inputs, and pressure to deliver exceptional lambing results year after year, the margins were getting squeezed tighter and tighter.

When Tom Sutherland came back to the family farm at 'Budgalong' near Wellington in the central west slopes region of NSW, he knew he wanted to grow the business.

For more than 30 years, the Sutherlands had built a strong operation around crossbred sheep. It was a system that had worked well for a long time: reliable lambs, decent returns, and a structure that seemed sustainable.

Tom grew up watching his family succeed with it. But when he returned home about six years ago, he realised that the business model that had once served them well may not work as well heading into the future.

"We had access to some of the best first-cross ewes in New South Wales," Tom said. "They were right next door – we'd literally walk them home up the lane. They produced excellent lambs, and for years we were happy with that."

Choosing Merinos

The business needed a model that could absorb the shocks.

That's when the Sutherland family started looking at Merinos again: modern dual-purpose Merinos designed for today's markets.

Genetics had changed, and so had the opportunities. Merinos can now produce a high-value fleece while also turning off quality lambs quickly and efficiently.

So, for Tom it was a case of combining those two incomes and building a business that was not only profitable but resilient.

They had the chance to buy classed-in Merino breeding ewes from three different properties in South Australia – top-quality sheep from proven bloodlines.

They selected 3,500 ewes that weren't mulesed and were aligned with Responsible Wool Standard (RWS) – which Tom says are non-negotiables for a business positioning itself for the future.

He says the global wool market had already made it clear that sustainability and welfare would drive premiums, and Tom wanted to be ahead of the curve.

What followed was a complete shift in strategy.

He said the enterprise will now steer towards building a self-replacing Merino flock, phasing out the crossbreds and creating a system that balances wool and lamb production.

Benchmarking data confirmed what Tom was seeing on the ground: even the average dual-purpose Merino producers were outperforming the top 10–20% of crossbred operations.

"That was a real eye-opener," Tom said. "It showed us we didn't need to be perfect every single year.

"With Merinos, you can have a tough season and still come out okay. That's what resilience looks like."

Efficiency and performance

The modern Merino has also impressed Tom with its efficiency and performance.

"With the Merino, the ewe efficiency was one of the biggest drivers when we were looking for sheep – a lower cost sheep that we could run – easy care, easy maintenance, and produce lambs that could turn off, into a prime lamb as well, when joined to the terminal," Tom said.

And gone are the days when a Merino wether took 12 months or more to finish.

Fed lucerne on highly improved country, Tom has seen weight gains of up to 300 to 400 grams a day in Merino ewe hoggets.

And because the genetics are well suited to their environment, the sheep are easier to manage, with less maintenance and fewer treatments required.

Flystrike, once a major concern, has also been dramatically reduced thanks to improved skin types.



The goal at 'Budgalong' is to cut about 6.5 kilograms of 18–19 micron wool per head.

During one particularly humid spell following 150 mm heavy rain in 15 days last December, Tom treated just a dozen sheep out of thousands with no prior fly treatment – a result he describes as "a huge testament" to the skin type in the animals he's running now.

The change has also given Tom greater flexibility in managing his land and resources.

With a move towards a spring joining system, the business is simplifying its operations and creating more time and better use of labour resources, whilst also increasing cashflow.

Their even summer-winter rainfall pattern means lambs can be turned off

steadily throughout the year, making the enterprise more predictable and efficient.

Today, the Sutherlands run about 6,600 joined ewes plus ewe lambs, with 3,500 Merinos joined to Merinos.

The goal is to cut about 6.5 kilograms of 18–19 micron wool per head, weaning 130%, turning off prime Merino lambs in under 10 months, and offer a highly sought after replacement ewe to the market.

By keeping everything aligned with market demands – from genetics to welfare standards – Tom hopes to make the business more resilient.

By combining wool and meat, overheads can be diluted, reducing his cost of production, and creating a more robust business model.

Even when prices move against them or the season turns tough, the business can absorb the hit and keep moving forward.

A future-proofed business

At just 29, Tom decided what many in his generation are avoiding. While plenty of young farmers are leaning into cattle or cropping – systems they see as less labour-intensive – Tom has backed the Merino, and he's doing it with data, strategy, and confidence.

"People still think Merinos are hard work," Tom said. "And some are. But there are Merinos, and then there are Merinos. If you choose the right sheep for your environment and pick the right bloodlines, they can work with you, not against you."

For Tom, the return to Merinos hasn't been

about sentiment or tradition – it's been about building a business that performs today and can handle whatever the next few decades throw at it.

The combination of steady wool returns, efficient lamb production, and alignment with global sustainability standards has transformed the operation into one that's both profitable and resilient.

For Tom, it's not just about running sheep; it's about building a business model designed to work in both good and bad periods.

"I wanted a system that could handle the ups and downs in farming," he said.

"Merinos will provide us with that. They will offer options, stability, and profitability."

Returning to Merinos has been a strategy to future-proof the business.





Pregnancy scanning is a tool that can improve your ability to strategically manage breeding ewes to improve productivity and profitability. It is important to use the information from scanning to achieve the benefit for your enterprise, writes Millie Sheales of AWI Extension QLD and Leading Sheep.

You can't manage what you don't measure

we nutrition is a key driver of net reproductive rate and the lifetime productivity of her progeny. Pregnancy scanning provides the information you require to optimally manage the nutrition and lambing conditions of breeding ewes. Scanning enables you to:

Benchmark: Develop a record of reproductive performance over time and track responsiveness to changes in management and seasons.

Scanning for multiples and tracking the proportion of multiples/singles/empty ewes provides insight into the impact of nutrition on reproductive performance of your flock.

Manage: Improve lambing outcomes by managing nutrition and paddock conditions for multiple-bearing ewes. Understanding your flock's lambing potential assists with pasture budgeting and financial planning.

Select: Identify and retain the 'performer' ewes and remove

'passengers' (i.e. once- or twice-empty or failed to rear ewes depending on your situation) to improve reproductive performance.

Making data-driven decisions

Pregnancy scanning ewes enables producers to make data-driven management and

Pregnancy scanning is low-cost with a high return on expenditure. It enables sheep producers to better meet the nutritional requirements of ewes of different litter sizes, including empty ewes, thereby increasing marking rates.

selection decisions. The decisions made possible with scanning are:

Ewes scanned empty

Identifying empty ewes gives you the option to:

- Run them for wool run them separately, stocking them at a higher rate than pregnant ewes.
- Re-join if it suits your management program – which can be useful when rebuilding post drought.
 - Sell which preserves pasture for productive animals; optimise the time of sale.
 - Detect a joining failure early.

Ewes scanned pregnant

Identifying pregnant ewes enables you to:

- Meet their higher nutritional requirements by allocating them to better pastures and/or supplementary feeding.
- Allocate them to sheltered paddocks.
- Sell ewes scanned-in-lamb to receive price premiums.

Ewes scanned for multiples

Identifying the number of foetuses (multiples) provides information for you to:

- Manage nutritional requirements to maximise ewe and lamb survival – this includes managing single bearing ewes to prevent them getting too fat and providing adequate energy and protein for multiple-bearing ewes.
- Modify mob size by having smaller mobs for multiple-bearing ewes.
- Allocate multiple-bearing ewes to the best pastures and most sheltered paddocks.
- Identify and select for the 'performer'

Set yourself and your scanner up for success

To maximise the accuracy of scanning, take the time to plan logistics and prepare your sheep, labour and infrastructure.

- Plan and prepare book your scanner and additional labour early.
- Scan at the optimal time call your scanner the day you put the rams in with the ewes to determine the most suitable scanning date.

Pregnancy scanning conducted by a trained contractor with specialised equipment. PHOTO: Cousins Merino Services.

- Hold ewes off feed and water for a minimum of six hours.
- Ensure adequate labour is present.
- If using electronic identification (eID), have a backup system.
- Consider the comfort of your scanner - provide shade where possible and water down the race if dust is expected.

Other factors that reduce the accuracy of scanning include joining for an extended period, light or fat ewes, and flighty sheep that are difficult to scan.

Pregnancy scanning resources

The AWI website provides a range of information resources to help woolgrowers maximise success with pregnancy scanning:

AWI & MLA extension publications

A pregnancy scanning benefit-cost analysis (BCA) funded by AWI and MLA found an average increase in profit of \$5.55 per ewe when scanned for multiples and that information is used for management decisions – see the box below. AWI and MLA have issued a set of five booklets and fact sheets to help sheep

producers get the most out of pregnancy scanning:

- 1. Pregnancy scanning: an ultra-sound investment -This booklet is the primary, 'go to' extension resource. It is a comprehensive publication that not only explains pregnancy scanning and how it works, but also includes the three resources listed 2-4 below.
- 2. The value of pregnancy scanning fact sheet -This two-page fact sheet summarises the results of the BCA, highlighting the economic benefit of pregnancy scanning and which

management interventions provide the greatest return on investment.

- 3. Ewe scanning and management **checklist** – A handy two-page checklist, this is designed to go on the fridge and be a reminder of the key dates, actions and activities for getting the most out of pregnancy scanning.
- 4. AWI and MLA resource guide **for sheep reproduction** – This is a comprehensive listing of AWI and MLA sheep reproduction resources with information on how to access them. The resources are grouped into four categories: Reproduction; Sheep health; Feedbase & nutrition; and Breeding
- 5. The value of pregnancy scanning: A benefit-cost analysis – If you're interested in more detail, this fivepage extract from the full BCA report includes the assumptions and growing season length for each scenario modelled in the BCA and includes a link to the full BCA report.

Pregnancy scanning webinars

AWI Extension NSW and Leading Sheep earlier this year ran two webinars that were recorded and are available to view:

- Scanning: an ultra-sound investment – delivered by Dr Sue Hatcher from Makin Outcomes, this webinar covers the new AWI and MLA pregnancy scanning resources; the value of scanning with insights from the BCA; and making data-driven management and selection decisions.
- I have my scanning results: what **now?** – delivered by Josh Cousins, Cousins Merino Services, this webinar explains how to best prepare your sheep for scanning to enable optimum information capture (think accuracy and a smooth scanning process). Josh discusses how to manage the data you capture to provide productivity gains in your flock – with one, or more, years' worth of data. The webinar also includes plenty of questions answered from the perspective of a scanning contractor.

MORE INFORMATION wool.com/pregscanning

Benefit-cost analysis proves the benefit of pregnancy scanning

ore than half of Australian sheep and wool producers do not scan their ewes, with the main reason for producers not scanning being because they 'see no benefit'.

A recent benefit-cost analysis funded by AWI and MLA shows that pregnancy scanning for multiples, and implementing optimal management to ewes based on their reproductive status, provides sheep and wool producers with a significant return

Scanning for multiples increased profit by an average of \$5.55 per ewe scanned, with an average return on investment of 400%.

- Scanning for multiples provided more than twice the average profit of scanning for only pregnancy status (pregnant
- Scanning for multiples is profitable in all Australian regions and flock types studied.
- Capturing the potential profit requires implementing some management changes to utilise the information provided from scanning.

With the evidence that pregnancy scanning is a valuable tool for increasing reproductive efficiency and farm profitability, it is anticipated there will be increased adoption of the practice.



To help optimise Merino ewe survival in the lead up to, during, and after lambing (the periparturient period), an AWI funded project has examined the prevalence and causes of Merino ewe periparturient mortality on-farm and begun trialling practical intervention strategies to reduce it.

s part of a four-year project funded by AWI and MLA, a team of researchers and veterinarians are working with Merino producers in key Australian wool-producing regions on a project to investigate ways to reduce rates of ewe mortality during the periparturient period.

Once the research is complete, the project will develop best practice management extension material to help producers optimise their ewes' survival.

"With ewes representing the most productive unit in a flock, and Merino ewes making up about two-thirds of Australia's breeding ewe flock, it is important for the Australian sheep and wool industry to optimise the health and survival of these ewes," said AWI General Manager, Research, Bridget Peachey.

"We know that ewe losses tend to occur mainly during and around lambing, so this project aims to trial and develop cost-effective and practical intervention strategies to increase ewe survival rates. Advice on best practice will be developed and made widely available for adoption by Merino sheep and wool producers."

Examination of ewe mortality

The project began by conducting a literature review of the causes and rates of ewe mortality during the lambing period, plus a national survey of more than 200 producers which helped gather further information about ewe mortality across the country.

The project, then began working closely with and collected on-farm ewe mortality data from 42 participating commercial Merino businesses in seven regional groups across WA, SA, Victoria and NSW.

Producer-reported data and veterinary investigations were used to determine the pattern of periparturient mortality across the farms as per the producers' regular management practices.

All the producers kept a farm diary to document ewe mortalities over the lambing season, including reporting cause of death if known. Veterinarians visited host-farms to conduct autopsies on ewes found dead to determine the cause-of-death at key stages of the lambing season.

The three most frequently diagnosed causes of death were dystocia (a prolonged or difficult birth), hypocalcaemia (milk fever), and metritis related septicaemia (infected uterus causing blood poisoning), either as sole or contributing causes. Comorbidities, that is co-occurring conditions, were identified.

The relative importance of causes of death varied between regions and farms. Less common diagnoses, but regionally or farm-significant diagnoses, included pregnancy toxaemia, vaginal prolapse, and ruminal acidosis.

Trialling intervention strategies

The second phase of the project is now trialling on-farm practical intervention strategies to reduce Merino ewe mortality. The intervention strategies have been informed by the literature review, the data from the first phase of the project, observations by the project veterinarians, and producer preference.

Of the 42 participating Merino businesses in the first phase of the project, 14 businesses (two in each of the seven

regional groups) will trial an intervention strategy during the 2025 lambing season whilst guided by an appointed project veterinarian.

The trial will be conducted in a Producer Demonstration Site (PDS) style with observer producers following the trials in each region.

Producers will keep a similar farm diary to what they did in the first phase of the project to document the cause of death of any deceased ewes in the trial. The project veterinarian will also conduct a postmortem to confirm the cause of death.

In all cases there will be a 'treatment mob' where the intervention strategy is applied, and a 'control mob' where the intervention strategy is not applied, i.e. they are managed by the producer as per their regular management practices.

The intervention strategies include:

- Calcium supplementation during periparturient period. The likely focus will be on the delivery method of the supplement (e.g. mixed in with grain, trail fed, lick feeder).
- Utilise condition scoring and weight of ewes prior to lambing, and draft out lighter ewes to allow differential management through feeding in a containment feeding system.
- Utilise condition scoring of ewes at joining, scanning and weaning, and draft them into groups to allow for differential feeding to reach target condition at lambing.
- Vitamin E supplementation. The focus will be on ewes in a containment feeding system or those being grainfed on dry pasture in the lead up to and during lambing. This will be used in conjunction with condition score monitoring.
- Vitamin ADE supplementation pre-lambing, using a commercial injectable supplement.

Any supplements given will be commercial products and administered according to label directions.

The project will also quantify the economic impacts of Merino ewe mortality and intervention strategies at farm and industry levels to help accelerate industry adoption of best practice management.

The project team consists five veterinary businesses (Well Stock, Millicent Veterinary Clinic, Apiam Animal Health, and AHN Consulting), three universities (University of Melbourne, Murdoch University, and Central Queensland University), a communications specialist (Hot Tin Roof Communications), and project coordinators Pinion Advisory.

MORE INFORMATION

Esmée de Looff edelooff@pinionadvisory.com

Wet and drying breeding ewes at lamb marking

Lamb marking is a busy and critical day in the on-farm annual management calendar. But lamb marking isn't only about the lambs, it is also a crucial time to sort through your ewes to check who has brought in a lamb for marking.

Wet and drying breeding ewes at lamb marking identifies ewes that have lambed and lost, as well as udder defects and abnormalities.

Undertaking this cheap, practical and simple on-farm procedure each year, and removing the ewes that fail to rear lambs from your breeding flock, reduces the impact of failed to rear ewes on your flock's net reproduction rate (NRR) and improves enterprise performance over time.

Table 1 below outlines the difference in key performance indicators of passengers (ewes that fail to rear their lambs – the bottom 25% of reproductive performance) and performers (ewes that consistently rear their lambs – the top 25%).

Ewes can differ massively in their reproductive performance, and the difference between economic value of passengers vs. performers is substantial over their lifetime. Notably, their dry sheep equivalent (DSE) rating and wool production is only marginally different.

The accuracy of wet and drying decreases the longer it is done after lambing; for example, when lambs are marked late or it is conducted at weaning. This is because the earlier lambers will have weaned their lambs and begun drying off and may be incorrectly identified as lambed and lost, when they are in fact some of your most productive ewes.



An udder assessment of your breeding ewes at lamb marking helps you to identify which ewes to keep and which should be removed, improving your flock's reproductive performance.

Whilst it may seem that one extra job at lamb marking is not possible, those producers who routinely wet and dry at lamb marking maintain that it is one of the more important jobs they conduct all year and are highly committed to the process.

One of the main upsides to identifying and removing lambed and lost ewes from the replacement breeding flock is that, in time, your NRR will become more consistent, and the impacts of adverse events (such as seasonal conditions) becomes less significant.

MORE INFORMATION wool.com/wet-and-dry

Table 1: The difference in lifetime performance and economic value between passenger and performer ewes

	Passengers – bottom 25%	Performers – top 25%	
Reproductive performance	Rears 1.2 lambs from 4 attempts	Rears 5.6 lambs from 4 attempts	
Annual wool production	Cuts +0.15 kg CFW	Cuts -0.15 kg CFW	
DSE rating/year	1.37 DSE – looks fatter	1.57 DSE – looks leaner	
\$/DSE/year	\$78/DSE	\$137/DSE	
Lifetime economic value	\$585	\$1,198	

Source: AWI Picking Performer Ewes, from Lee et al (2009) (adapted by AWI)

Using eID for profit and productivity

Ben Webb of Marbarrup Farms at Kojonup in WA has used electronic identification (eID) to improve his flock's productivity by collecting meaningful data, gaining deeper insights into his flock's performance, and making more informed decisions on farm.

uring a recent webinar hosted by AWI Extension WA, Kojonup woolgrower Ben Webb of Marbarrup Farms, and expert Mark Ferguson from neXtgen Agri, shared their practical tips and experiences on how to use eID to boost farm profit and productivity.

Ben's experience shows that even without a strong technology background, eID has been a game changer in his enterprise. It has saved him time and improved productivity and therefore profitability – he wouldn't go back to farming without it.

Ben and his wife, Emily, run a mixed enterprise of Merino sheep and cropping on 2,150 hectares about 35 km west of Kojonup in the southern wheatbelt of WA. In addition to the 3,200 ewes in their commercial Merino flock, they also breed rams from 770 ewes for Merinotech, an intensively recorded ram breeding nucleus founded in 1988 by a group of WA Merino breeders.

elD a game changer

Ben and his father, Bill, started using electronic tags about 15 years ago to collect data in their ram breeding enterprise, which Ben says was a pivotal moment for the business.

"Electronic tags are so much easier, quicker, and more accurate to use than visual tags," Ben said.

"For us, collecting data starts at pregnancy scanning. I scan the sheep with the stick reader (the eID reader, also known as a wand) and when the scanner calls out wet/dry, single/twin, I simply press one, two, or three on the stick reader. It's that straightforward and doesn't slow the scanner down at all," Ben said.

"Throughout the year, we collect data on health and welfare traits like breech wrinkle and cover, dags, worm egg counts, feet and structural traits. In February when the rams go out, we also do a pre-joining collection of data for back fat, eye muscle depth, body weight and condition score for each ewe – it all gets recorded and stored on my laptop.

"On the wool side of things, out in the yards at shearing we do mid-side samples



Ben Webb of Marbarrup Farms at Kojonup, WA.

which we send to Genstock for micron and yield testing, and we also record fleece weight at shearing."

It's important to capture life data early on. Lamb marking is a crucial time to collect data using eID. Recording whether a lamb was born a single or a twin, or out of a maiden or mixed-age ewe, should ideally happen at lamb marking. If this information isn't recorded at marking, the richness of the dataset later is significantly reduced and you can never get that foundational data back for that animal.

Start simple and build up

Producers new to eID technology don't need to start with expensive equipment – they can start simple. An eID reader and basic software like Excel would be sufficient for many producers starting out.

"We started with a stick reader and a Panasonic TOUGHBOOK laptop. You can do a lot with just a stick reader; you don't need a huge initial investment to gather useful data that can lead to valuable insights, especially when life data is recorded early," Ben said.

"We use Shearwell tags, and we now store all the data in a software program from Sapien Technology called KoolCollect which we've found to be easy to use. The company provides excellent support, so if there is a problem, we simply call up the

helpline and they'll sort us out. They can remote log on to my computer which is very handy because I'm not very tech savvy."

After starting with just a stick reader, Ben has since upgraded his yards with a classing crate, scales and autodrafter, all of which have helped streamline his eID data collection.

Ben has recently started using eID in his commercial flock and plans to collect and utilise more data in the future.

"I would like to be able to count the sheep through the race, so I'll set up panel readers at the end of the drafting or drenching race," he said. "We'll also probably start collecting some reproduction data from the

commercial flock at scanning which is pretty easy, it doesn't slow anything down."

Ben also tracks lamb weight gains on different fodder crops like lupins and faba beans; eID allows him to quantify which feeds provide the best growth.

"I also wouldn't mind trialling the OptiWeigh technology for in-paddock weighing so I can get some ideas on how the lambs are ticking along in the paddocks."

For all woolgrowers, eID is here to stay and embracing the data opportunities it presents is a path to more informed, profitable and productive sheep farming. It can take two to three years to build a useful data set, but once you do, the insights are powerful.

MORE INFORMATION wool.com/marbarrup

Precision Sheep Management (PSM)

new five-year project funded by AWI and Meat & Livestock Australia aims to unlock the broad potential of eID for sheep and wool producers to improve their on-farm productivity and profitability. If you are interested in participating in this initiative, please see wool.com/psm and contact carolina.diaz@wool.com.



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Weaning – setting up for success

Weaning is a significant event in the management calendar. At a time when both lamb and ewe productivity is on the line, there are a number of key components to consider, writes Alison Desmond of AWI Extension VIC and BestWool/BestLamb.

Weaning is crucial for both lamb and ewe productivity. The aim of the sheep industry is for a survival rate from weaning to one year of age of 95% or better.

Joining length, feed quality, ewe condition, time of weaning, target weaning weight and average daily weight gain all play a role in the success of weaning. While effective management and timely weaning supports the lifetime productivity of the lambs, it also allows the ewes to recover condition before the next joining period.

Time of weaning

Did you know a ewe reaches the peak of her lactation about 20–30 days after she lambs? Yet the lamb's requirements continue to increase well beyond what she's capable of providing. By 12–14 weeks after lambing, the ewe is providing a very small proportion of the nutritional requirements of the lamb (Figure 1).

SINGLE LAMBS

5

Ewe milk
Lamb intake

1

Weeks from birth

Figure 1: Ewe milk production peaks and pasture becomes increasingly important. Source: AWI Winning With Weaners, from Geenty (2010) (adapted by AWI).

The recommended weaning age is no later than 14 weeks after the start of lambing; however, lambs can be weaned at 8–10 weeks or even earlier if appropriately fed and managed. Lambs that are weaned early should be marked, given at least four weeks to heal if mulesed, and be at least 10 kg. It is important to feed early weaned lambs a diet with appropriate levels of protein and energy.

When seasonal conditions are tough and pasture availability is low over lambing, early weaning of lambs is a useful management option. Early weaning reduces the total feed requirements of the flock, because ewes and lambs can be fed and managed to their differing nutritional requirements.

Other benefits of early weaning include:

- Preventing ewes from losing further condition, as stopping lactation reduces the ewe's energy requirements.
 - Reducing the ewe's energy requirements, reducing feed costs, and improving the efficiency of feed use.
 - Extra time for the ewes to regain condition before their next joining, increasing their reproductive performance next year.

- Targeted nutrition for the weaners to optimise growth rates.
- Reduced worm burdens of the lambs as they are removed from contaminated pastures.
- Increased wool production from the ewes and lambs.

Importance of imprint feeding

Imprint feeding encourages lambs to readily eat supplementary feed after they are weaned. This is an important tactic before weaning, regardless of whether you are early weaning or not.

Ewes and lambs are required to be supplementary fed several times over a few weeks in the lead up to weaning, to allow the ewes to teach the lambs the feed is safe to eat. It is important to imprint them using the method of feeding (self-feeders, trail feeding) and the type of supplementary feed that you plan on feeding the weaners and ensure that 90% of lambs are eating the supplementary feed on offer.

Imprint feeding can significantly reduce the time it takes for lambs to adjust to a new feed source and minimises the risk of shy feeders, which puts them at risk of lower growth rates while they adapt.

Merino weaners have a reputation for not being the easiest part of a flock to manage. But they are a vital part of any self-replacing Merino enterprise because they are the next breeders and wool growers.



Target weaning weight and growth

While the timing of weaning is critical, the liveweight of the lambs at weaning is just as critical. There is a direct correlation between liveweight of weaners and weaner survival, as shown in Figure 2. Target weaning weight (TWW) is 45% of your ewe's standard reference weight (SRW). SRW is the average weight of your mature ewes when not pregnant, bare shorn, in condition score 3, with no gut fill. You can calculate the SRW of your flock using the simple calculator found at wool.com/weaning.

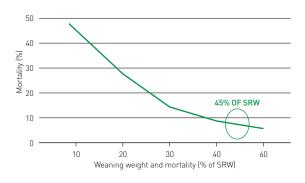


Figure 2: Higher weaning weights reduce mortality. Source: AWI Winning With Weaners, from Hatcher et al. (2008), Hocking Edwards et al. (2008) (adapted by AWI).

The target growth rate for weaners to reduce the risk of mortality is at least 50 g/hd/day or 1.5 kg/month. Small increases in weaning weight and growth rates post-weaning significantly improve weaner survival. For example, a 14 kg weaner has a 34% lower mortality risk than a 12 kg weaner, and a 20 kg weaner has a 22% lower mortality risk than an 18 kg weaner.

It is important to weigh weaners at weaning and then monitor the weights at least every 4–6 weeks after weaning to ensure target growth rates are being achieved.

Ewe weaners must have sufficient growth rates to reach their liveweight targets to ensure adequate conception at first joining, regardless of their age.

A timely and well executed weaning will have a positive impact on the joining performance of the ewe the following year and a positive impact on the lifetime reproductive performance of their lambs.

AWI weaner management resources

The AWI website provides a range of the information resources to help woolgrowers identify key management

> strategies to improve the lifetime performance of their Merino weaners:

AWI Winning With Weaners workshop

A one-day workshop that helps woolgrowers identify key management strategies to improve the lifetime performance of their Merino weaners. It is available through the state-based AWI Extension Networks. In a March 2024 Beyond the Bale article (available on the website), woolgrowers Tony Overton of Walcha and Rob Kelly of Guyra explained

how their Merino enterprises benefitted after they attended a Winning With Weaners workshop.

AWI Winning With Weaners workshop online

A one-hour, condensed version of the above workshop, which is available as a recorded webinar.

Making More from Sheep (MMFS) Module 10: Wean More Lambs

This module of the MMFS best practice guide provides the framework and guidelines to set in place all the important



Merino weaners need to reach bodyweight targets to ensure the highest survival rates. Ewe weaners need to reach growth targets to achieve satisfactory reproduction performance as maiden ewes

management steps to improve flock reproduction rates and lamb survival to weaning.

AWI Change Makers (Episode 2): Weaning to manage

A 5-minute video outlining some key practical management tips.

Downloadable tools

The website provides access to these useful tools in PDF format:

- Standard reference weight (SRW) calculator – enables you to calculate the SRW for your flock, allowing for more accurate feed budgeting and management decisions.
- Weaner management checklist a checklist of the key management practices and targets for a thriving weaner mob.
- Feed budget tables for Merino weaners – enables you to first set your target weaning weight (TWW) and growth targets, then understand your weaners' requirements based on the quality and quantity of feed you have available.

MORE INFORMATION

wool.com/weaning

Industry recommendations to lift weaner performance

- Your minimum target weaning weight (TWW) is 45% of your ewes' standard reference weight (SRW), the average weight of your mature ewes when not pregnant, bare shorn, condition score 3, no gut fill.
- Have a 5-week joining period to avoid a tail in the weaner mob.
- Imprint (train) lambs to eat supplementary feed prior to weaning.
- Use best practice lamb marking procedures (hygiene, vaccination, anaesthesia and analgesia, etc).
- Wean no later than 14 weeks from the start of lambing.
- Manage lighter weight lambs separately and feed them to achieve the target growth rates ASAP.
- · Wean onto high quality pasture where possible and/or supplementary feed.
- Provide high quality, clean drinking water.
- Ensure good internal parasite control (monitoring and effective drenching).
- Regularly monitor weaner liveweight to reach target growth rates.

Improving resilience in Merinos

Merino wethers at the MLP project site at Armidale, NSW, were used in the AWI-funded resilience project.

To help develop selection strategies for Merino woolgrowers, a collaborative project between AWI and CSIRO using progeny at the New England Merino Lifetime Productivity (MLP) project site has assessed the relationships between resilience, production and health.



Key points

- An AWI-CSIRO project has found that improvements in wool cut, fibre diameter and wool quality has not penalised Merino resilience. There are small unfavourable correlations with weaning weight and yearling weight, and small favourable correlations with dags and worm resistance.
- The project found that genetic improvement in resilience is possible with Merinos.
- Given increased susceptibility to disease in other species with increases in productivity, ongoing monitoring and future checking of Merino resilience is warranted.

During their lives on farm, livestock are exposed to many short-term environmental challenges that can negatively impact their health, welfare and productivity.

With support from AWI, CSIRO has investigated ways to identify and select Merino sheep that combine resilience to disease with high production. The genetic relationships between resilience, health and production had not previously been extensively studied in Merino sheep.

Resilience refers to the capacity of an animal's immune system to respond to a challenge and quickly return to their pre-challenge state. The ability of an animal's immune system to respond can be measured by their response to vaccination or immune competence.

Animals with a low immune response tend to return to their pre-challenge state

more slowly, whereas those with a high immune response bounce back faster. This measure is well accepted across species as a good measure of resilience.

In some livestock species – such as dairy and beef cattle, pigs and poultry – selection for production traits, with little to no emphasis on health and fitness, has increased their susceptibility to disease, raising

animal health costs and resistance to treatments such as antibiotics.

CSIRO study explores resilience in Merinos

The initial phase of the AWI-CSIRO study suggested some positive correlations between resilience and health traits in Merinos, but some negative correlations between resilience and production existed. More data was needed to obtain significant results, which led to a second phase of the study to build a larger dataset.

A second phase of the project using Merino Lifetime Productivity (MLP) project first generation (F1) and second generation (F2) progeny at the New England site was launched. It aimed to increase data volume and investigate some of the mechanisms that are involved in identifying resilient and productive animals and how to utilise this information.

The MLP project site at Armidale, NSW, produced extensively measured, genotyped and pedigree-recorded progeny. At weaning in their respective years, the 2017 and 2018 drop F1 wether progeny and all F2 progeny from the 2022 and 2023 drops were measured for their response to vaccination. Post weaning, the animals were managed up to 12 months of age in as close to a commercial Merino operation as possible with extensive phenotype recording of a range of production and health traits.

These traits were examined to assess relationships between resilience, production and health, to help develop selection strategies producers could use to simultaneously select resilient and productive animals.

Key research questions included:

- Are there potential trade-offs between resilience and production traits for wool or meat production?
- Are there differences at a genetic level that can be identified which might allow for faster progress towards resilient animals?
- Would the Merino industry benefit by looking for more resilient and sustainable animals?

Utilising a deeply measured and pedigreed flock provided the best opportunity to answer these questions. In total, more than 4,500 animals were measured for immune competence and a range of production and health traits.

Project results

Key findings about immune competence (IC) included:

- IC is moderately to highly heritable (0.375±0.004), and significant phenotypic variation exists in Merinos
- IC has a low favourable, significant genetic correlation with:
 - Post-weaning Worm Egg Count (PWEC): -0.101±0.004
 - Post-weaning Dag (PDAG):-0.126±0.004
- IC has a low unfavourable, significant genetic correlation with:
 - Weaning Weight (WWT): -0.102±0.004
 - Yearling Weight (YWT): -0.106±0.004
- Favourable relationships between IC and measured health traits indicate IC is a useful method of assessing general disease resistance.

The results indicate that, over a long period, continued selection in the Merino industry for high production with no emphasis on health and disease traits will lead to more susceptibility to disease, similar to what has been demonstrated in several other production animal species.

Industry implications

Action now through the incorporation of health and fitness traits into selection indexes would help future proof the Merino industry against similar collapses in other livestock species.

"The sustainability of the Merino industry depends on having animals that are fit for purpose, profitable, and a clear demonstration of the highest levels of animal welfare," said CSIRO researcher Amy Bell.

"Higher levels of disease, which the results indicate will happen if selection pressure over a long period remains solely on production, is likely to result in increased mortality, increased labour costs

due to the need for intervention, treatment, and management of disease, and the subsequent loss of production.

"Investment in the best genetics available for production is compromised if the animals cannot survive in the production environment. The MLP sires had large variation in their ewe progeny survival, although the heritability was low at 0.06, similar to Weaning Rate.

"Some animals may demonstrate high levels of production but are artificially 'productive' if the level of production is only achieved with the constant use of chemical interventions to prevent, minimise, and treat impacts of disease."

However, the results of the recent CSIRO study do indicate that it is possible to achieve a lower incidence and severity of disease in resilient sheep, and genetic improvement in resilience is achievable in a Merino population.

"Resilient animals require less health interventions and treatment, and improved levels of resilience across the industry enhances the sustainability credentials of sheep enterprises. Having more resilient animals in the industry clearly demonstrates a strong focus on maximising animal welfare and provides a metric for assessing improvements in sustainability," Amy said.

Genomic selection tools

A new commercialisation project between MLA, CSIRO, Neogen Australasia and AGBU has commenced, utilising the collected data to develop and deliver genomic selection tools to enhance immune competence of Australian Merino sheep.

If successful, the genomic selection tools will be delivered by Sheep Genetics, providing the Merino sheep industry with an avenue to future proof and protect the industry from the adverse experiences in other production species. The tools will improve the ability of producers to meet consumer demands for the highest standards of animal health, welfare and sustainability.

Key project outcomes

Based on current data and analysis to date, ongoing selection for

- increased Merino growth rates has and will have a small significant unfavourable impact on immune competence (a component of resilience)
- Merino wool traits to date have not yet had a significant effect on immune competence
- Improvements in animal health traits like WEC and Dag will indirectly improve immune competence.

As the rate of genetic gain increases in the Merino, unfavourable impacts

on immune competence will need to be monitored to avoid the larger unfavourable immune competence impacts experienced in other, more intensive livestock production species.

Unfortunately, some components of resilience are currently too expensive to measure on farm and its assessment will be limited to genomic resource populations and developing genomic breeding values. But the CSIRO team is working on protocols to allow these measurements to be undertaken pen-side. General improvements in animal health traits, like WEC and Dag, can be utilised.



Merino Lifetime Productivity project update

The Merino Lifetime Productivity (MLP) project is currently analysing more than 2,000,000 data points to gain deeper insights into breeding and selection methods applied at early ages. The objective is to refine the industry's recommendations so that producers can achieve improved lifetime profitability.



MLP quick facts

The AWI-funded MLP project is a \$13 million (\$8 million from AWI plus \$5 million from project partners), 10-year venture between AWI, 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 Limited
- Macquarie, Trangie, NSW Partner: NSW DPIRD Committee: Macquarie Sire **Evaluation Association**
- New England, NSW Partner: CSIRO Committee: New England Merino Sire Evaluation Association

The MLP project has tracked the lifetime performance of 5,700 ewes as they proceeded through four to five joinings and annual shearings.

A full suite of assessments has been taken on the ewes including visual trait scoring, classer gradings, and objective measurements of a range of key traits and Index evaluations, along with a DNA genotype at the start and end the of their lives.

A unique and extensive dataset has been created that is being used to enhance existing Merino breeding and selection strategies, for both ram sellers and buyers, to deliver greater lifetime productivity and woolgrower returns, selecting both rams and ewes at young ages, now and into the future.

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



Woolgrowers at one of the many field days that have been held during the project: MerinoLink at Temora, NSW.

he MLP project has been a 10-year industry partnership to develop a dataset that captures lifetime performance of Merinos across environments and genotypes.

Launched in 2015, the project joined 5,700 ewes – the daughters of 134 sires across five diverse Australian sites over 4–5 joinings. It collected more than 2,000,000 data points to build an industry resource for the analysis of lifetime performance – both in terms of productivity and profitability.

On its tenth anniversary, AWI Program Manager, Sheep Genetics & Animal Welfare Advocacy, Geoff Lindon, provided an update on the MLP project via webinar. The 45-minute webinar presentation, followed by a 45-minute Q&A session was recorded and is available for viewing at wool.com/MLP.

This article provides a summary of some of the key points from the webinar.

Data submitted to MERINOSELECT:

The MLP data has been submitted to the MERINOSELECT database. This has not only enhanced genetic analysis as a whole, it has also enabled several new traits to have the data they required to be released to industry. It has improved the accuracy and accessibility of genomic breeding technologies and reporting to the Merino industry.

New Weaning Rate trait: MLP assisted with the creation of the new Weaning Rate (WR) trait and its three component traits: Conception Rate (CON), Litter Size (LS) and Ewe Rearing Ability (ERA).

MERINOSELECT index updates: MLP has assisted with the MERINOSELECT analysis and Index updates in 2022 and 2024 and will again for the coming updates. All ASBVs are now genomically

enhanced, including adult traits. Sires bred with and without ASBVs: Analysis shows that the sires in the MLP project bred with and without ASBVs show similar end results when comparing MERINOSELECT Index figures, but the way they get to the final figure is different. The non-ASBV bred rams showed improved Adult Clean Fleece Weight (ACFW), whilst those bred with ASBVs showed improved Yearling Fat (YFAT), Yearling Eye Muscle Depth (YEMD), Yearling Worm Egg Count (YWEC) and

Weaning Rate (WR) figures.

Better predictions at younger **ages:** The MLP project focusses on sire reranking across years and improving early predictions of adult traits. Currently the sires that tend to rise in fleece weight ranking between Post Weaning (P) and Adult (A) ages tend to be later maturing, high fleece value animals, and those that fall tend to be earlier maturing, low wrinkle sires (although there are outliers that complicate this assessment). When breeding animals for lower wrinkle but aiming to optimise fleece weight, there needs to be added focus on hogget and adult age fleece weight traits. The current analysis into maturity patterns and better very young age predictions is reviewing this further.

Importance of adult fleece weight ASBVs:

Hogget and adult fleece wool accounts for 60–90% of total wool production. The remaining 10–40% comes from one-year-old post-weaner or yearling wool. The exact proportions vary depending on factors such as sheep type, breeding objectives, time of shearing, and when young wethers and ewes are sold.

Where Hogget or Adult direct assessments are not possible (flock rams are sold by 14–15 months and even some ewe classing is moving earlier before they cut their teeth), genomics can increase the accuracy of their Hogget and Adult age trait predictions, so it still adds transparency to display these traits even when a direct measure at Hogget or Adult age has not been taken.

Given the dominance of hogget and adult wool, growers that are seeking to optimise lifetime wool production need to have a good focus on Hogget and Adult age fleece weight traits.

Making Adult fleece weight ASBVs more readily accessible to ram and semen buyers adds transparency for this important economic trait.

MLP 'Add On' projects: The MLP project spawned many 'Add On' projects which enhanced the outputs and knowledge built during the project. These have shown:

- Poor udders reduce Weaning Weight and lamb survival.
- Resilience is not correlated with wool traits. There is a small unfavourable correlation with Weaning and Yearling Weight and a small favourable correlation with Dag and Worm Egg Count.
- Fat and Weaning Rate are lowly correlated, but it is best to select directly for Weaning Rate (WR) if it is an important trait in your breeding objective.
- Skin pigment at early ages is a good indication of lifetime pigment.
- Mid-side wool sampling is best for measuring yield, even in drought conditions when there's high dust penetration.

- There is promise in Methane breeding values, with Project Breeding Values created and work ongoing to collect more data to complete analysis.
- There is a 20–30% difference in whole body fat between sires of the same liveweight, and this is highly correlated with carcase fat depth.
- Testing levels of anti-mullerian hormone (AMH) at three months of age in Merinos is not a good indicator of lifetime Weaning Rate (unlike some other species).
- Improving meat eating quality traits

 such as Intramuscular Fat (IMF) and

 Shearforce (SF5) has no unfavourable impact on wool traits.
 - It is possible to have a breeding value for flystrike, and pilot Project Breeding Values for breech strike and body strike were released in January 2025.

Assessment protocols: Assessment protocols are critical for both visual and

measured assessments:

- Classing can be costeffective when selecting for traits that can be assessed visually (fleece weight and body weight)
- Breeding Values work and accumulate data across years
- Both require quality protocols, performance assessments and raw data
- Assessments at 18–22
 months of age are more
 predictive of lifetime wool
 production and progeny
 performance than using
 9-month-old Post Weaning
 or 12-month-old Yearling
 data. Including at least

one late Hogget or Adult fleece record on ewes improves productivity and progeny performance predictions.

Feed efficiency: Outcomes from the AWI-funded MLP Add On project 'Genetic evaluation of productivity, efficiency and profitability' (GEPEP) will be fully reported throughout 2026 (as soon as it is finished). The recently updated feed standards have been incorporated into the project analysis. The outcomes will start to be adopted in future MERINOSELECT analysis and Index reviews and thereafter as the knowledge in this important efficiency area grows.

Gross margin per DSE and profit per hectare: In the forthcoming economic analysis, both gross margin per DSE and profit per hectare will be reported. Once completed, these will be promoted widely and made publicly available at wool.com/MLP and form a significant part of the MLP communications throughout 2026.

Analysis of sire mating success: All the lambs born into the MLP project were DNA parentage tested, which has allowed for interesting analysis. One such example is sire mating success, which looked at the number of F2 progeny marked per sire, per joining. One standout was a ram at the MLP New England site that ended up with 231 progeny from a single joining (in a high twinning rate year) – this was four times higher than the average ram progeny numbers. Top 20% rams sired more than eight times more progeny on average than bottom 20% rams across the five MLP sites.

Scientific publications: Where copyright allows, all scientific publications will be uploaded to wool.com/MLP (most will be eligible for posting). These scientific publications will also be summarised into more targeted information for woolgrowers to use practically on-farm.

MLA Flock Profile tool: MLA has released the Flock Profile tool where commercial Merino growers can DNA test 20 random ewe hoggets and receive a report that benchmarks their genetics to the now large Merino reference population. MLA is also about to release within flock genomic only breeding values for individually DNA tested animals. This opens up the benefits of genomics to woolgrowers outside the ASBV system, making genomic technology available all woolgrowers.

Ongoing analysis: Data collection was completed in August 2024 and validated. Analysis of those 2,000,000+ data points from diverse sires, ewe bases, environments, and sites is continuing. Topics currently being worked on include:

- Full genetic parameter estimates
- Better ways of predicting Adult traits at very young ages
- Economic analysis, including gross margin/DSE and profit/ha and their correlation with Indexes
- Economic benefit and cost of fat and body weight
- A benefit-cost analysis of visual and measured assessments.

More results are coming: The MLP project's impact will keep growing as the analysis continues. Woolgrowers can look forward to new insights and practical tools to boost breeding decisions, enhance genetic evaluations, and improve on-farm profitability and sustainability.

Early results have already offered valuable tips on reproduction, wool production, and the power of combining visual and objective assessments – but there's much more to come. Stay tuned for economic analyses, breeding program insights, and evidence-based recommendations.

FURTHER INFORMATION AND RESOURCES ON THE FOLLOWING PAGE



Further information and resources

Access and download these resources at: wool.com/ btb-104-mlp



MLP website wool.com/MLP



Making More From Sheep, Module 9: Boost business with breeding



AWI Sheep Selection Tools booklet



AWI & MLA Visual Sheep Scores guide



Sheep Genetics: ASBVs and Indexes explained



Sheep Genetics: Flock Profile



AWI Visual Classing Merino Sheep booklet



AWI Picking Performer Ewes™ workshop



AWI Practical Workshops

AWI Beyond the Bale articles



Assessing, classing and selecting sheep December 2023



Visual Sheep Scores guide updated for 2024 September 2024



Unlocking genetic potential: the importance of quality raw data in breeding March 2025



Merino Genomic Reference Flock June 2023



AWI genomic investments June 2025



MLP project proving its value December 2023



Leveraging research from the MLP project September 2023



MERINOSELECT ASBVs by fibre diameter and their genetic trends December 2024



Selection for more methane efficient sheep June 2025



How well does early performance predict lifetime performance of MLP sires? June 2024

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Tim McDonald, Producer



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Be prepared for flystrike season

As we head into flystrike season, now is the time to implement your annual flystrike management plan. Early prevention of flystrike is key to minimising animal welfare and economic threats. The suite of resources in the AWI Flystrike Extension Program are now available for woolgrowers.

t is important to have a broad flystrike management plan which incorporates the following three aspects, but preventing flystrike is key.

1. Prevention of flystrike

Selecting sheep which are less susceptible to flystrike is a key long-term approach to reducing flystrike risk. Short-term preventative activities include shearing or crutching to remove wool and dags, reducing the risk of scouring which causes dags, applying appropriate chemical treatments, careful selection of less flystrike-prone paddocks, and killing maggots and removing sources of protein. These strategies work best when used together as part of an integrated flystrike management program. See the page opposite.

2. Monitoring to detect flystrike

Monitor all mobs of sheep for signs of flystrike during higher-risk periods, but especially weaners. Monitoring involves a combination of checks including looking

for flystrike in sheep, checking populations of flies, and checking weather conditions.

3. Treatment options when flystrike occurs

Make sure you use a combination of treatment activities and that you don't rely on one single activity. It's important to make sure all flystruck sheep are effectively treated, all maggots are killed, and sources of protein are removed, to aid the sheep's recovery and break the lifecycle of flies to prevent additional strikes. Cull struck sheep as they are more likely to get struck again.

AWI Flystrike Extension Program

AWI's Flystrike Extension Program is available to woolgrowers across Australia to improve the lifetime welfare of their sheep, reduce their reliance on mulesing and chemical use, and increase whole farm profitability.

All six components of AWI's Flystrike Extension Program are now available to

woolgrowers to support their flystrike management - see below.

Woolgrowers can pick and choose how to get involved with the different components of the program that best suits their requirements, sheep type, climate, operating environment and husbandry practices.

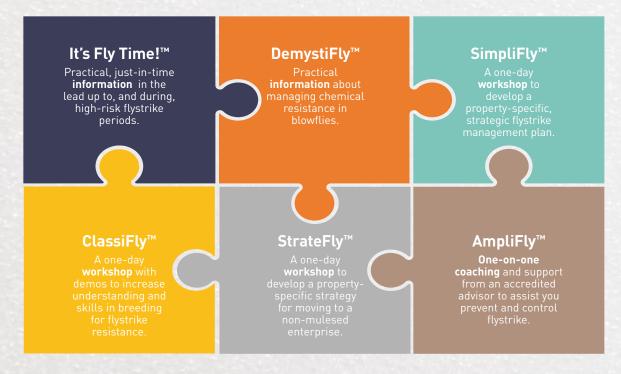
MORE INFORMATION

Information on the above AWI Flystrike Extension Program is available at wool.com/flystrikeresources

For information on SimpliFly™, ClassiFly[™] and StrateFly[™] workshops available near you, contact the AWI Extension Network in your state and sign up to their free newsletters. You can find your network at wool.com/networks or call AWI on 1800 070 099.

Detailed information on flystrike management, including access to interactive decision support tools, is at flyboss.com.au

Information on AWI's flystrike research, development and extension is at wool.com/flystrike



What can I do to prevent flystrike?

Selecting sheep which are less susceptible to flystrike is a key long-term approach to reducing flystrike risk. This includes selecting for low breech wrinkle and wool cover and low incidence of dags and stain.

Culling sheep which have previously been struck is also advisable. The AWI and Meat & Livestock Australia publication *Visual Sheep Scores* (available at **wool.com/vss-2024**) is a useful tool to help select and cull sheep.

See the next page for information on AWI's one-day ClassiFly $^{\text{TM}}$ workshop which increases woolgrowers' understanding and skills in breeding for flystrike resistance.

Well-timed preventative strategies can help reduce the risk of flystrike and minimise the need for treatment. **Shortterm preventative activities** which help reduce the risk of flystrike include:

1. Shear or crutch to remove wool and dags

Shearing and crutching are effective preventative activities which reduce the formation of dags and urine stain, and reduce wool length so the breech area dries more quickly.

Shearing and crutching can provide up to six weeks protection from body and breech flystrike. If sheep are scouring, this protection may be reduced to three weeks.

Shearing or crutching should be planned to coincide with the start, or just before the usual start, of the fly season. This is particularly important for lambing ewes that may have more stain around their breech.

Carefully consider the timing of shearing and crutching. Aim to extend the period of protection over the fly season as much as possible by 'spacing out' these activities, bearing in mind the usual highrisk periods for flies in your area.

2. Tail dock to the optimal length when marking lambs

When marking lambs, ensure tail length is appropriate to minimise stain around the breech and reduce flystrike risk throughout the sheep's life. The recommended tail length for ewes is to ensure the healed tail covers the vulva. This means docking below the third or fourth palpable joint. Male lambs should

have their tails docked to the same length as ewe lambs.

This is the optimal length to allow sheep to lift their tail to channel urine and faeces away from breech wool and use their tail to swish flies away. It also helps to prevent prolapse (common in sheep with very short tails) and protects soft tissue from cancers caused by sun exposure.

3. Apply preventative chemicals to sheep to protect against strike

Insecticides can be used in combination with other preventative activities to deter flies but they shouldn't be relied upon alone.

These chemicals are registered to be used either as a preventative measure or to treat struck animals ('dressings'). Some chemicals only provide protection and will not kill older maggots.

Wool length can impact the effectiveness of preventative chemicals. It is vital you use the right chemical for the task, and follow the label instructions to use effective chemicals in the right way.

Where possible, time applications to extend the protection period. For example, if you shear in early December, applying a preventative chemical six weeks later in mid-January can help to protect the sheep.

Use the ParaBoss Products Search tool, available at flyboss.com.au/sheep-goats/ treatment/products.php, to work out the most appropriate preventative chemical and application method for your situation.

When considering a chemical treatment check for withholding periods and intervals. The law requires you keep accurate records of any chemical treatments used.

4. Reduce the risk of scouring which causes dags

Scouring can cause dags to form rapidly. Dags cause the wool and skin around the breech to stay moist and warm, providing an attractive site for flies to lay eggs and maggots to develop.

Preventing scouring and dags is an important step to reduce the risk of breech flystrike. Several species of internal parasite cause scouring while others, such as *Haemonchus contortus* (barber's pole worm), do not. Monitoring the populations of worms which cause scouring using faecal egg counts and drenching when required can help reduce the risk of scouring.

It is also important to avoid sudden changes in diet that may induce scouring, such as the introduction of grain or forage crops.

5. Carefully select paddocks

Most properties have certain paddocks where sheep are at higher risk of flystrike (for example, protected creek paddocks or wet flats) and others where the risk is lower (for example, exposed paddocks with less ground cover, timber and wet areas, where sheep dry out rapidly and fly activity is low). A possible option during periods of high flystrike risk is to avoid the hotspots that encourage fly activity by moving highrisk flocks to the more exposed paddocks.

Avoid paddocks that may be contaminated with a large population of scouring worm larvae (for example, those that have been recently grazed) during the fly season to help prevent scouring.

6. Kill maggots and remove sources of protein

It is important to remove and dispose of any fleece or waste animal matter (dags, dirty wool pieces, horn tips, tails, etc) and, where possible, carcases, to eliminate these as a source of protein for both the Australian sheep blowfly and other flies. Household waste and protein-rich manure are other sources of protein to which flies are attracted.

Any maggots and maggoty wool removed from struck sheep should be collected, sealed in a plastic bag, and left in the sun for a few days to ensure the maggots are dead.

Flies do not generally travel far so reducing their numbers at a property level can make a significant difference to the incidence of flystrike on individual properties and in the local area.

No single prevention strategy should be relied upon alone. Make sure you use a range of welltimed strategies in combination.

MORE INFORMATION

Preventing and treating flystrike fact sheet: wool.com/fly-prevent Recognising and monitoring flystrike factsheet: wool.com/fly-monitor

> TURN OVER FOR AN ARTICLE ABOUT AWI'S CLASSIFLY™ WORKSHOP



ClassiFly™ workshop: Breeding for flystrike resistance

AWI held its first ClassiFly™ workshop last month aimed at woolgrowers looking to improve their understanding of what is involved in breeding sheep that are more naturally resistant to flystrike.

mproving a sheep's natural resistance to flystrike through breeding reduces woolgrowers' reliance on chemical use, mulesing and crutching. These activities are generally the most labour intensive and costly tools, so reducing reliance on these can improve productivity and profitability, along with improving the lifetime welfare of sheep.

A ClassiFly™ workshop is suitable for any grower that is looking to improve their understanding of what is involved in breeding sheep that are resistant to flystrike, regardless of their climate, and operating and husbandry environments.

The one-day workshop is designed to increase woolgrower knowledge and skills in classing and selection strategies for improved flystrike resistance in both mulesed and non-mulesed sheep. During the workshop, woolgrowers work through practical activities that enable them to leave with a written breeding objective, specific to their property, that helps further focus their breeding and selection decisions on traits that improve overall animal welfare, profitability and productivity.

The one-day workshop is delivered by AWI-accredited advisors in partnership with the AWI Extension Networks in each state.

Following a series of previous pilot workshops to fine tune their delivery, the first ClassiFly[™] was held in August in Curban on the central-west plains of NSW.

Run by AWI Extension NSW, the workshop was attended by 26 producers and delivered by Sally Martin of SheepMetriX.

Participants rated the workshop 7.84/10.

79% said they learnt something new while the remaining 21% said it reinforced what they already knew.

A full house at the recent ClassiFly™ workshop near Gilgandra, NSW.



To find out when there is going to be a workshop available near you or to register your interest in a ClassiFlyTM workshop in your region, contact your state AWI Extension Network and sign up to their free newsletters. For contact details and information about AWI Extension Networks visit wool.com/networks.

MORE INFORMATION wool.com/classifly



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The Footrot Solution

Footrot is a pervasive issue affecting sheep and goats, with significant impacts on animal welfare and farm productivity. Fortunately, RADICATE offers a revolutionary solution for controlling, treating, and progressively eradicating all strains of footrot. This concentrated footbath solution provides protection with just a 15-minute treatment, safeguarding your flock to be returned to the same paddock.

RADICATE's unique formula is a great option to ensure your flock does not have dormant Footrot because it could emerge when conditions are right. Wet boots in the morning and a warm spring day – great for spreading footrot. This is why after a drought or winter footrot returns.





As RADICATE turns 30 in September 2025, we're celebrating this milestone with a special offer. Thanks to the dedication of Milton and Maureen Colburt, RADICATE has become a trusted name in footrot treatment.

To commemorate this "Footrot Fiona" their daughter is offering a 30% discount on all orders made directly or via the online shop during September and October 2025.

Use code BTB30 to avail this offer.

A Drum of RADICATE normally \$750 plus GST will be available for \$525 plus GST.

Freight will be charged at cost

ex Melbourne or Wagga Wagga.

FOOTROT FREE is the way to be!









Elanco delivers value beyond the drum

When you purchase a quality animal health solution from Elanco, you are getting far more than the contents of the drum. You are getting the full resources of one of the world's largest animal health companies.

stablished in 1954, Elanco is a global leader in the research, development and commercialisation of products that improve the health and well-being of food and companion animals.

Some of its well-known brands used in the sheep and wool industry include CLiK™ Extra, Extinosad™ Pour-On, Viper™ Pour-On and Zolvix™ Plus. Many of these products are manufactured locally to world-class standards to ensure quality, uniformity, traceability and optimal performance.

Elanco employs more than 100 staff in Australia, including 20 regionally-based territory managers, strategic account managers and technical consultants. They include Senior Territory Manager, Will King, who has more than eight years' experience as an animal health advisor.

Based in Mangoplah, NSW, his region encompasses southern Riverina and northern Victoria. Equal parts animal health advisor, staff trainer, business manager and company ambassador, his role demands up to 100 nights away from home and 75,000 km of travel every year.

Will makes hundreds of on-farm and in-store visits every year, as well as participating in dozens of livestock shows, sales, field days and industry events. "Put simply, my job is to make sure livestock producers get the most from their investment in quality animal health solutions from Elanco," he says.

"Sure, you can save a few cents per head by using a cheaper product, but you are missing out on a range of value-added services that can help you to get the best outcome.

"That starts with providing regular training for all reseller staff to make sure producers are getting the best advice when they are in-store. We also spend a lot of time on-farm discussing strategic animal health programs and best practice guidelines with producers, contractors and farm staff.

'We'll show them how to apply the product correctly and safely and ensure that their applicator is properly maintained - and then we do the first race with them to make sure everything is working properly."

Will also conducts up to 80 worm egg count, drench efficacy and drench resistance tests each year. "The amount of drench resistance out there is really quite staggering, and you'd never know if you don't test," he says.

"Some drenches, even triples, are delivering way below 98% or even 95% efficacy, which means some producers



Elanco Territory Manager, Will King.

have limited drench options. I really like the diagnostics side of the business.

"Any territory manager can say, 'Here's what you should be using'. For me, it's far more satisfying to be able to say, 'Here's the results of an objective test that shows exactly what's going on'.

"Elanco is fortunate to have a lot of great brands, so often the best solution is an Elanco product but there are times when it's not and we're happy to recommend accordingly."

Will also works with Elanco's technical consultants to follow up any time a producer experiences an outcome that was less than expected when using an Elanco product. "Elanco stands behind the integrity of our products and will always investigate any concerns for the betterment of both parties. With Elanco, you get value beyond the price of the drum," he says.





Get more value from Elanco

Get more value from your animal health program with Elanco. Our comprehensive range of quality animal health solutions are scientifically-proven to improve the health and wellbeing of livestock. Our team of regionally-based advisors provide practical, on-farm advice about strategic animal health programs, best practice guidelines, application training, applicator servicing and a range of diagnostic services. Don't just treat your sheep this season - get full value with trusted solutions from Elanco.













Tri-Solfen® is the first step in delivering best practice pain relief for lambs following mulesing, surgical docking or castration.

This easy-to-apply, spray-on gel provides immediate and lasting relief against acute pain for up to 24 hours, reduces bleeding; protects against infection; and facilitates wound healing.

Tri-Solfen is ideal for use in combination with non-steroidal anti-inflammatory drugs (e.g. meloxicam) to provide comprehensive, longer-lasting relief from both acute and chronic pain.¹ Contact Dechra, your rural reseller or veterinarian and find out how providing pain relief using Tri-Solfen is a better choice for your livestock, your business and your industry.



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Pollinators creating a buzz for productivity and biodiversity

Maintaining an abundance and diversity of pollinating insects can benefit a variety of sheep grazing systems including native pastures, fodder crops, and nitrogen-fixing pasture legumes such as clover.

n Australia, pollinators such as honey bees, native bees, and other native insects like hoverflies, wasps and butterflies are an essential component of agricultural production and of healthy, biodiverse landscapes.

Pollination by insects benefits pasture, fodder crops, and shelterbelts as well as food crops, and crops grown for seed production (e.g. canola). Protecting and enhancing pollinator resources on-farm will therefore help support the sustainability and productivity of sheep grazing enterprises. It is a win-win situation: pollinators help woolgrowers, if woolgrowers support pollinators.

While over-grazing of pastures can have a negative impact on pollinator populations, well-managed grazing can support pollinators. For example, the strategic resting of pasture during rotational grazing can enhance flowering, growth and survival of plant species, which can benefit invertebrate and pollinator biodiversity.

In addition, the disturbance to the ground from periodic grazing by livestock can provide nesting opportunities for solitary, ground-nesting bees. This was proved by a recent Montana State University study of pollinator response to livestock grazing in the rangelands of Montana, which found that bees were 2–3 times more prevalent on grazed land than ungrazed land.

About 70% of Australia's bees are ground-nesting bees. Most other bees in Australia are solitary bees that nest in preexisting cavities such as between tree bark. Australia is home to about 1,700 species of native bee, but few of these are colonyforming bees.

A diverse and healthy community of pollinators generally provides more effective and stable pollination than relying on any single species.

Encouraging pollinators on your property

The Australian National University's Sustainable Farms initiative and the Wheen Bee Foundation has provided a handy guide to encouraging pollinators in farming landscapes.

Create pollination reservoirs

Pollination reservoirs are areas of native plant species that provide floral resources for pollinators. They can be new plantings or existing habitat. **New plantings** can be trees, shrubs and ground cover. Use a combination of direct seed sowing and planting tube stock to establish new vegetation. New trees and shrubs can also be useful as shelterbelts. Initial watering and protection from grazing will improve the success rate of young plants. Protect and improve existing habitat where possible. Roadsides, shelterbelts, dam margins, woodlands, grasslands, rocky areas and river and creek edges can all be important pollinator-attracting areas, bringing valuable pollination services to your farm.

Reduce chemical use where possible

Insecticides, fungicides, and herbicides all affect pollinator health. Herbicides can impact pollinators by reducing the availability and diversity of flora. Insecticides are an obvious threat to pollinators. When chemical pest control is unavoidable, select products that are least harmful for pollinators and consider applying insecticides when pollinators are less active, for example in the evening.

Plant according to habitat type and prepare for change

When establishing pollinator habitat, consider including species that are indigenous to your area but can tolerate increasingly drier and warmer conditions, to create resilient habitat for the future

Pollinators such as bees can have a productivity benefit as well as a biodiversity benefit in sheep grazing enterprises. PHOTO: Searsie.

under climate change. Rehabilitate weedy areas into managed pollination reservoirs by introducing higher native plant diversity. Be careful not to plant invasive or listed weeds.

Amplify the flower signal

Plants have evolved large flowers or clusters of smaller flowers because they attract more pollinator visits. Large, colourful and diverse plantings attract more pollinators. Ideally, plant in groups that use all the vegetation layers possible such as a species-rich mixture of forbs, ground covers, shrubs, and trees.

Utilise ecotones

Ecotones are the margins between two different habitats. Ecotones often contain a more diverse mixture of species because they are used by species from both habitats. Protect and utilise ecotones such as the transition zones between woodland and grassland, or wetland and grassland to create highly diverse floral and insect communities.

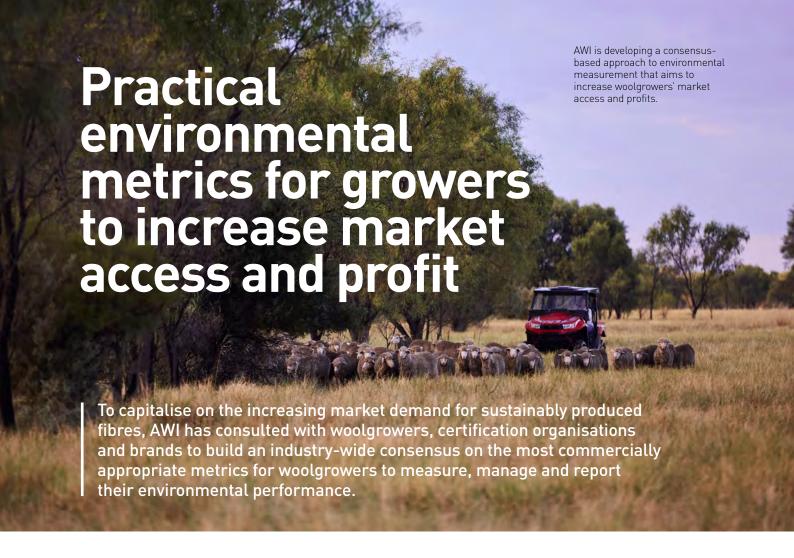
Get to know your local bush

Each farm and region will have distinct populations of insects, based on the plants and climate. Identifying and understanding the insects in your area will help you develop better plantings. The plants growing in nearby bush will be well suited to the climate and soils in your region.

Double the crop value

Plants that are pollinator-attracting are sometimes crop species in their own right and can be used to diversify farm production. Bush foods such as desert limes, bush tomato, yam daisy and many more are in high demand for use in fresh and manufactured products. Native plant seed is needed for revegetation projects. Supporting beekeepers by hosting beehives is an opportunity to increase pollinator numbers on the farm.

MORE INFORMATION sustainablefarms.org.au



ith markets becoming heavily focused on environmental sustainability, the global textile and apparel industry is increasingly interested in sourcing products made from fibre that is produced in a 'regenerative' or 'nature positive' way. However, these terms mean different things to different people across the supply chain.

In response, AWI is working on a collaborative project to develop a series of practical, science-based environmental metrics to assess and report environmental outcomes on wool farms. This ensures that environmental performance claims are underpinned by credible evidence that can be accepted and used right across the supply chain – by woolgrowers, brokers and buyers, on-farm environmental certification organisations, and brands.

The AWI-funded project to develop the Nature Positive Farming Framework was conducted by Farming for the Future in collaboration with the Research Centre for Future Landscapes at La Trobe University, and Enviro-dynamics.

AWI Program Manager, Fibre Advocacy & Eco Credentials, Angus Ireland, says buyers and brands want independent evidence that the wool they buy is sourced from nature positive farms. Engaging with on-farm environmental certification schemes can increase business profitability through improved market access, while also improving farm resilience to climate change.

"Woolgrowers can increase demand for their wool by joining these certification schemes. Currently, only about one in every ten bales of Australian wool is certified as sustainably produced, despite positive environmental practices being widespread across Australian woolgrowing properties," Angus said.

"The issue is that, for woolgrowers to join environmental certification schemes at scale, they need to see the return on investment. Through this project, AWI is working to back up claims of positive environmental performance with credible proof, by enabling robust objective evidence to be cost-effectively provided," Angus said.

"Current inconsistency in farmscale measures drives up the cost and complexity of measurement, and confuses the market. Aligning measurement and reporting with an environmental framework the market trusts is helping overcome this challenge.

"The wool industry must drive the agenda. A continued focus on carbon alone would be detrimental to wool because the broader environmental and social benefits of wool, and the wool industry, would be ignored."

Metrics for measuring on-farm environmental performance

As reported in *Beyond the Bale* last year, the nature positive farming project initially developed a list of 12 metrics for measuring environmental performance on wool

properties. The project has now refined the list down to 10 priority metrics see Table 1 on the opposite page.

The project has also created a draft scoring protocol to assess the nature positive farming status for each of these core metrics at farm level.

Metrics developed through consultation

The 10 core metrics were developed through consultation and a critical review of the metrics' relevance, usability, and cost of measurement for stakeholders.

"Woolgrower and supply chain consultation has been a crucial component of the project to ensure the framework is not only scientifically credible but commercially relevant and practically feasible for the wool supply chain," Angus said. "The metrics have been designed to be compliant with international reporting required by brands, such as the Science Based Targets initiative."

During the past six months, the project team has conducted:

- four consultation meetings with woolgrowers and certification organisations
- six one-on-one meetings with certification organisations to align the scoring protocols and governance of the initiative
- two stakeholder surveys targeting woolgrowers, brands, and service providers

Table 1: Metrics for measuring environmental performance

Metric	Description	Scoring protocol	Metric source
Aquatic condition	Vegetation cover along creeks and rivers	0-1 score	Remotely sensed
Ecological condition	Change in the landscape since 1800s	0-1 score	On-ground observations
Fertiliser use intensity	Amount of N and P fertiliser used to grow wool	kg N+P/kg wool	Farm data
Forage condition	Condition of pastures	0-1 score	On-ground observations
Ground cover	Amount of soil not exposed	% ground cover	Remotely sensed
Net GHG emissions intensity	5-year average annual emissions minus woody sequestration	scope 1, 2, & 3 emissions minus kg CO2e/kg wool	Farm data and Remotely sensed
Pest/herb/fungicide use	Amount used to grow wool	kg or litres	Farm data
Shade and shelter	How far production areas are from tree cover	0-1 score	Remotely sensed
Tree cover	Proportion of trees in the landscape	% tree cover	Remotely sensed
Water use intensity	Amount of water used to grow wool	litres of water/kg wool	Farm data

a data provider workshop and seven follow-up sessions to understand the capabilities of current data collection of on-farm outcomes.

Although there is further work still to do, the project has been positively embraced by all the wool industry stakeholders involved, including woolgrowers, certification organisations, brokers and buyers, and brands.

Next steps: pilot testing phase

A final focus group has been held to review the scope of the pilot testing phase which will be the next phase of the project. The pilot testing phase will focus on positioning the initiative for commercial scalability by examining:

Data consistency and cost – ensuring on-farm metric data is able to be collected accurately, repeatably, and

affordably across different agroclimatic regions and enterprise mixes.

- Regional calibration comparing regional scoring and fine-tuning metrics, like tree and ground cover, to ensure fairness in how scores are calculated across Australia's diverse wool-growing regions.
- Measuring of status and trends testing the guidelines and processes for calculating metric status and trends
- Robust reporting ensuring reporting satisfies both brand and woolgrower needs, including emerging scope 3 reporting requirements.
- Governance of the initiative establishing the initial governance of the nature positive farming framework for the Australian wool industry. The Nature Positive Farming

Framework comprises one of the initiatives within the Woolmark+ roadmap.

Looking ahead, AWI plans to build the Framework into a new Woolmark+ specification. This will be an extension of the existing Woolmark Certification Scheme, but with an added layer: it will recognise products made from wool grown on farms that are actively delivering positive environmental outcomes. It will allow brands to source wool that meets the highquality standards Woolmark is known for – and will then also come with verified naturepositive credentials. And just like the classic Woolmark symbol, this new sub-brand will speak directly to consumers - helping them connect the dots between quality, sustainability, and the story behind the fibre.

MORE INFORMATION

woolmark.com/nature-positiveframework

Pioneering insetting program for wool

The Woolmark+ Australian Wool Insetting Program is developing and trialling an insetting framework for the Australian wool industry, aimed at keeping GHG emissions reductions and associated nature outcomes within the wool textile value chain.

his industry-first, three-year pilot program will create the foundation of an Australia-wide wool insetting market, connecting Australian woolgrowers with global apparel brands and wool manufacturers looking to meet their scope 3 emissions targets, to jointly deliver on-farm emissions reductions and removals activities.

The program is well advanced in developing the core technical components required to pilot an insetting framework that meets the needs of both woolgrowers and brands. Outreach and engagement efforts have generated strong interest from leading fashion and textile brands.

Pre-feasibility assessments are underway for all participating woolgrowers to identify opportunities and prioritise

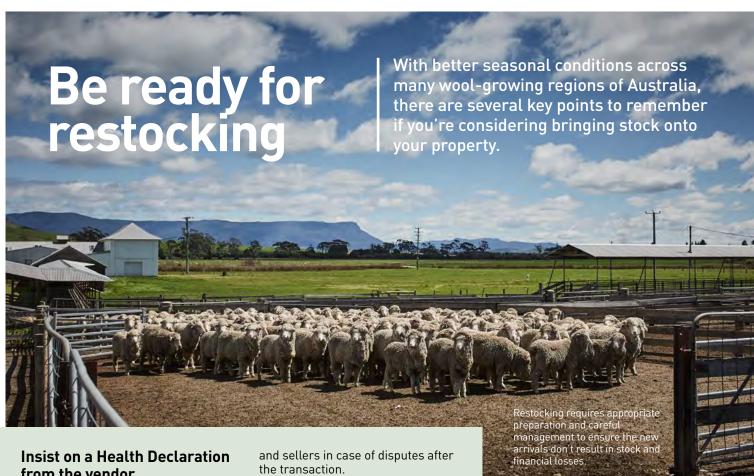


interventions for the pilot. These include evaluating current soil organic carbon and potential to increase it through practice change, identifying potential sites for new environmental plantings, and analysing the emissions removal contribution of existing vegetation.

The program represents a significant step towards positioning the Australian wool industry as a leader in delivering integrated climate and nature solutions. It comprises one of the initiatives within the Woolmark+ roadmap.

The program is supported by the Australian Government through funding from the Climate-Smart Agriculture Program under the Natural Heritage Trust.

MORE INFORMATION wool.com/insetting



from the vendor

The National Sheep Health Declaration (NSHD) is the most important disease risk management tool producers can use when buying or agisting sheep.

By insisting on an NSHD, buyers can assess the risk for ovine Johne's disease and a range of other biosecurity issues, including footrot, lice, and ovine brucellosis. The NSHD includes vaccination and other treatment history, and features a series of 'yes/no' questions to enable buyers to quickly make informed decisions.

Besides maintaining overall flock health and productivity, having this knowledge before buying can save you time, money, and resources treating and managing outbreaks. Importantly, as a legal document that records the health status of the sheep at the time of sale, the NSHD can protect buyers

NSHDs are mandatory for all sheep movements into and within South Australia and for moving sheep into NSW and Tasmania. It is voluntary in other states.

Quarantine new sheep upon arrival

At the farm level, this involves placing newly introduced animals in a secure quarantine paddock to prevent the potential spread of pests or diseases to the rest of the flock. A general guideline is to maintain quarantine for at least three weeks, allowing time for any signs of illness to emerge. However, the duration may vary depending on the individual animals and the specific disease being monitored.

MORE INFORMATION farmbiosecurity.com.au

Key health risks to watch for

Ovine Johne's disease (OJD): OJD is incurable and animals showing clinical signs, usually wasting in older sheep and sometimes diarrhoea, inevitably die. Key points to consider are:

- Know the signs and look out for mobs with a distinct 'tail'.
- Know the high risk OJD areas and the original origin of your sheep.
- More information: animalhealthaustralia.com.au/about-jd

Worm drench resistance: The sheep you buy will likely be carrying worms.

You do not want to buy in drench resistance with the sheep.

- Good quarantine and effective drenching is critical. A quarantine drench includes a combination of at least four unrelated actives with at least one of these being the newest drench actives (monepantel or derquantel).
- Hold sheep in the yards or in a secure, quarantine paddock after drenching to make sure all introduced worm eggs have passed through the gastrointestinal tract. This is especially important if your paddocks have a low worm burden (e.g. if they have been

destocked for some time). If feasible, keep this quarantine paddock free of sheep and goats for three to six months.

- Use the NSHD to identify previous worm control practices.
- If you don't intend to drench, try to graze the sheep on your most heavily infested paddock(s) to dilute the incoming worm population.
- More information: wormboss.com.au

Sheep lice: Up to 30% of purchased sheep will be carrying lice; sheep lice are most difficult to find when the sheep are up to two months off shears.

- At a minimum, good quarantine is essential to limit the spread of any problem. Treatment can then be considered at shearing. To be completely sure the sheep don't have lice, keep them separate for at least six months or until after the next shearing.
- Consider treating immediately, plus or minus shearing, but beware of chemical residues.
- Look for risk factors on the vendor's property, such as regular trading, poor fences, or an inability to get a clean muster.
- When transporting woolly sheep, ensure the truck is cleaned beforehand.
- More information: liceboss.com.au

Purchasing pregnant ewes: It's best not to truck heavily pregnant ewes as they are susceptible to pregnancy toxaemia.

• If unavoidable, load ewes lightly and offer food and water immediately on arrival.

- Remember the maximum time off water (24–48 hours) and spelling periods (12–36 hours) vary between classes of animals.
- More information: 'Fit to Load' resources at mla.com.au

Footrot: Footrot can cause significant economic loss from reduced wool growth and quality, poor ewe fertility, poor growth rates, losses from flystrike, and reduced value of sale sheep. Control of the disease can also be very expensive. The NSHD contains important information to enable you to make an informed decision on footrot. Quarantine of sheep is a crucial biosecurity measure to prevent the spread of this infectious disease. If newly introduced animals are suspected of carrying footrot, they should be kept in isolation until after a period of warm, wet weather conditions that promote symptom development so the disease can be accurately identified.

Weeds and grasses: Keep an eye out for possible contamination of wool and skin with noxious weeds or grasses.

Feeding on arrival

If stock have travelled long distances and have been off feed for an extended period they will be hungry, thirsty, and their bodies' chemicals might be depleted.

Provide plenty of hay: Fill the sheep with hay, or provide a paddock with suitable dry grass, so there is less room in their stomach for them to eat large

quantities of toxic plants/rich green feed all at once. This gives the animals time to get over the trip and let the rumen adjust to the new feed. Sheep do most of their grazing in the morning, so to manage the risk of overindulgence, take them to their paddock in the afternoon.

Provide a welcome drink: Make sure to push sheep onto water so they can get a drink and know where it is. Do it twice to be sure and check them regularly.

Consider minerals: After a long trip, the body's chemicals can be depleted, especially calcium. Having calcium, salt, and magnesium available in one tub per 100 sheep in the holding yards can be beneficial if they, especially pregnant ewes, have low levels.

Beware of:

Poisonous weeds: Don't put them into a yard or holding paddock with large amounts of potentially poisonous weeds or plants that have accumulated high levels of nitrate. The high amounts of urine and faecal matter common in yards and holding paddocks can cause nitrate poisoning from plants.

Pulpy kidney: Rapid changes in feed or going on to large amounts of green feed can quickly cause pulpy kidney and sudden death. Consider vaccinating – you don't have to prevent many losses to make the benefit-cost ratio of vaccinating very obvious.

Other things to consider

Can you afford to restock? Be careful if you are buying stock on a high market. If you can't afford to restock through buying stock, then there are other options to consider (agistment, lease, trading or breeding). Take the time to do your own calculations, and if unsure, seek help from a trusted advisor.

Do your research: Seek out local knowledge as to the sheep and the vendor's property. If the sheep delivered differ from the description given, let your agent know ASAP. Question the vendor as to the origin of the sheep. Do not assume they are vendor bred or of the same bloodline.

National Livestock Identification System (NLIS): Keep a record of the property of origin of livestock and notify the NLIS database of relevant movements.

Properties declared Ceased Mulesed: If you are declared on the National Wool Declaration (NWD) as Ceased Mulesed at a property level, where no sheep on your property are mulesed (born or purchased), this will be impacted when purchasing and bringing mulesed sheep onto the property.

MORE INFORMATION

June 2020 Beyond the Bale article: 'Don't be a basil fawlty! How to greet new arrivals to your property': wool.com/new-arrivals

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Check your TIMERITE® spray date

With spraying underway for the control of redlegged earth mites, it's important for woolgrowers to check they have the best spray date for their farm. Their date can be obtained through the TIMERITE tool which has been updated to reflect new data and improved modelling.

Redlegged earth mites (RLEM) can be a major pasture pest for woolgrowers in the winter rainfall regions of southern Australia. RLEM are small (1 mm long) with black bodies and red legs, spending most of their time on the soil surface, moving onto plants to feed. The mites compete with sheep for pasture, which leads to production losses.

Strategic spraying of pastures in late winter—early spring can help minimise RLEM damage to pastures the following autumn. However, the best date to spray depends on where in Australia the farm is located.

The optimum date for your farm can be obtained through the TIMERITE tool at timerite.com.au.

"The TIMERITE tool was first launched more than 20 years ago but woolgrowers should check they have the 'Best spray date' for their farm, as these dates have shifted with new data and improved modelling," said AWI National Extension Manager, Emily King.



Redlegged earth mites and feeding damage.

"In addition to the Best spray date, the tool also now provides a date range – the Ideal spray window – for which control of RLEM is still very high. This provides growers with improved flexibility to plan a spray window, then spray when the weather is suitable.

"The new TIMERITE tool is also easier to use. Instead of the grower having to enter their farm's coordinates, they now simply need to enter their postcode. Additionally, growers can visualise the impact on mite control if spraying outside the Ideal spray window."

TIMERITE is effective against RLEM, but not against other pasture pests (including blue oat mite and others which look similar), so it's important you know which pest you're dealing with on your property. You should only spray when needed to help prevent pesticide resistance.

The first step in managing RLEM is to reduce risk within a paddock. Avoid sowing highly susceptible pasture species or crops into paddocks known to have high mite numbers; and incorporating a cereal crop into your rotation will reduce mite numbers. Control weeds, especially broadleaf weeds, within paddocks and along fence lines. Heavily grazing pastures in spring and burning stubbles will reduce mite numbers the following autumn.

TIMERITE was originally developed and funded by AWI and CSIRO. Updates and improvements were made by Cesar Australia in collaboration with CSIRO, AWI, GRDC and MLA.

MORE INFORMATION timerite.com.au



If you're a farmer who wants wool harvesting to be easy and profitable and are looking for more control over weather, labour costs and capital expenditure, then *check out* why a ShearMaster will save you time, stress and money.

TPW marks 50 innovative years

The company behind the iconic TPW Woolpress – a machine that transformed wool baling across Australia and New Zealand – is celebrating a major milestone: 50 years of innovation, safety, and performance in the wool industry.

Since 1975, TPW (originally Theresia Perfection Welding) has been helping wool producers work smarter and safer, thanks to its world-class baling equipment that reduces manual labour, increases shed safety, and delivers faster, more efficient turnaround times. The result? Tighter bales, accurate weighing, and better returns for growers.

Founded in the Kenwick/Maddington area of Perth, Western Australia, TPW was the brainchild of John Theresia Jordans. His legacy lives on today, with the company's original Fastbaler evolving into the advanced TPW Xpress Woolpress – now recognised as the gold standard for wool handlers and contractors across both sides of the Tasman.

The company's journey took a new turn in 2001 when Heiniger Australia – already distributing TPW products across the Eastern seaboard – acquired the business following Mr Jordans' passing. The move

Hurry, contact your local rural supplies store now!

cemented a long-standing partnership and gave the TPW brand new momentum under Heiniger's stewardship.

"Reaching 50 years is an extraordinary achievement," said Dale Harris, Joint CEO of Heiniger Australia & New Zealand. "It's a milestone built on innovation, trust, and a deep connection to the shearing shed – qualities that have underpinned TPW since day one.

"It's also a proud alignment with Heiniger's own heritage. Our parent company is nearing 80 years of global excellence in precision engineering and fibre removal. Together, TPW and Heiniger share a commitment to providing primary producers with equipment that's built to last – and built to lead."

From the award-winning Slimline Woolpress and Aussie Xpress, to the purpose-designed Kiwi Xpress launched in 1996, TPW's machines have continually evolved with the industry. More recently, the compact and powerful TPW Backease 600 Hoist has gained popularity as a trusted lifting solution across both farms and industry.

For contractors and wool handlers, the TPW Woolpress remains a benchmark of performance. "It's not just about automation," said Mr Harris. "It's about consistency, reliability, and helping wool stay globally competitive. The TPW Woolpress didn't just keep pace with industry evolution – it helped lead it."

To mark this milestone, Heiniger is offering a limited-time promotion: with every TPW Xpress Woolpress purchased, customers will receive a free TPW Backease 600 Hoist – a gesture that celebrates the company's legacy while equipping sheds for the future.

MORE INFORMATION

heiniger.com.au/shearing/tpw-50years or 08 9434 0000



Heiniger Australia heiniger.com.au



Shearer and wool handler training

AWI funds hands-on, practical, in-shed training for shearers and wool handlers across the country to attract and retain new entrants into the wool harvesting industry; increase workers' productivity, skills, and professionalism; and increase returns to woolgrowers through improved clip preparation practices.

WI continues to fund and support Ahands-on, practical, in-shed training for shearers and wool handlers. Pictured above is a small selection of AWI-funded courses recently run across the country.

As well as improver workshops and novice workshops, AWI also funds education programs for high school students.

- **Improver workshops** These are run to assist new entrants and learner shearers currently working in industry to improve their shearing and wool handling skills.
- **Novice workshops** These provide school leavers and new entrants to the wool industry, generally aged 16 to 25, with training geared towards gaining full-time employment in the industry.
- Education programs These are targeted at high school students in years 9 to 12 and have an emphasis on the variety of career pathways within the industry.

"With the increased availability of experienced shearers, across all states including those from overseas, the opportunity for someone completing a novice course to progress to a full-time stand has become more limited," said AWI National Manager, Wool Harvesting Training & Careers Development, Craig French.

"As a result, AWI is placing more focus on mentoring and keeping full-time learner shearers engaged and improving their skills, with the aim to help retain them in teams on a stand. As well as training shearers, AWI also has a focus on attracting and retaining wool handlers and other wool harvesting staff."

AWI has only a limited number of AWI Learner Shearer Toolkits left to present to learner shearers. Once this limited supply has been presented, likely by the end of this calendar year, then no more will be issued. The Toolkits contain a Heiniger handpiece and other shearing

gear; the shearer must have passed certain strict criteria to receive them.

AWI-funded trainers carry out wool harvesting training in New South Wales, Western Australia, Oueensland and Tasmania. In Victoria and South Australia, the AWI-funded training is provided by the Shearing Contractors Association of Australia Shearer Woolhandler Training Inc (SCAA SWTI).

AWI thanks all the woolgrowers who provide their facilities and sheep, and all the other organisations and individuals that lend their time and resources to help run this training.

To arrange training in your state, email craig.french@wool.comorswt@wool.com. Keep an eye on the Facebook channels of @australianwoolinnovation (NSW, WA, Qld) and @shearerwoolhandlertraining (Vic, SA, Tas) for the latest updates.

MORE INFORMATION

wool.com/harvestingtraining

Trainers at the Western Australia workshop held at the WA College of Agriculture Narrogin.





Training wool harvesting trainers

AWI-funded shearing and wool handling trainers in WA and NSW came together at workshops on best practice wool harvesting techniques, held in June at Narrogin and Coleambally respectively.

The WA and NSW workshops followed the similar workshop held in February at Naracoorte, South Australia, for SCAA SWTI trainers that carry out AWI-funded training in Victoria, South Australia and Tasmania (see the previous edition of *Beyond the Bale*).

Workshops such as these are held to ensure both current and new trainers carry out a consistent and high level of shearing and wool handling training at AWI-funded in-shed training and workshops.

Topics at the recent workshops included best practice shearing patterns and footwork, best practice grinding and gear selection for different types of sheep and different districts, consistent terminology used by trainers to guide shearers and wool handlers, and animal welfare training.

The high quality of training benefits woolgrowers by increasing the availability of skilled and professional wool harvesting staff and improved clip preparation practices.

Trainers at the NSW workshop held at Paraway Pastoral's Cooinbil Station near Coleambally.



Educating wool's next generation

AWI is involved in a range of initiatives to encourage the younger generation into the wool industry. Reported here is a snapshot of some recent AWI-supported initiatives.

Hay Inc Rural Education program

With the support of AWI, the Hay Inc Rural Education Program in the Hay district of NSW has helped 15 young people aged 18 to 25 years gain hands-on agricultural skills and experience in 2025.

The 15 young participants from across Australia who took part in the eleventh annual Hay Inc Rural Education Program came to together in June for their third and final training week. This concluded with them competing in the Hay Merino Sheep Show junior sheep judging competition followed by their graduation at which they were presented with their certificates.

The Hay Inc Rural Education Program was launched in 2014 with support from AWI in response to concerns about the decline in the traditional jackaroo/jillaroo system in the western Riverina district of NSW and the associated lack of stockmanship and other essential rural skills being handed down to the younger generation.

"Since the Hay Inc program was launched, 165 young people have now been given the opportunity to learn the practical agricultural skills needed for them to increase their employment opportunities on rural properties. It focuses on wool and livestock production and takes place in a practical setting in partnership with local woolgrowers," said program manager, Sandra Ireson.





"The program is delivered by trainers who have many years of experience on extensive rural properties and in the livestock industry, covering topics based around the production calendar for sheep and wool production."

The Hay Inc program is a three-week course, in three blocks of five days' training, this year in February, March and June.

Practical sheep and wool topics covered included sheep handling and yard work; shearing, wool handling and wool shed

management; sheep nutrition and grazing; lamb marking; and working dog training. A three-day shearing school was delivered by AWI trainers Brian Sullivan and Mike Pora at Paraway Pastoral's 'Steam Plains' property near Conargo, with a wool handling presentation by Hay Inc alumni, Emilia Browne.

Other topics included fence construction and maintenance; water infrastructure and auditing; on-farm butchering; quad bike, motorbike and tractor operation and maintenance; farm health, safety and first aid; stretching and relaxation techniques; and employment finance and paperwork. There was also a discussion with an Ag Careers Panel about careers in the industry.

Hay Inc is planning networking events and opportunities for the 165 alumni that have taken part in the program.

AWI has supported the Hay Inc program each year it has been held since its inception. By supporting industryled programs like this, AWI has helped improve the skills and engagement of young people interested in working in the wool industry.

Tax deductible donations can be made to the Hay Inc Rural Education Program through Hay Inc's fundraising account with Foundation for Rural & Regional Renewal (FRRR). See the website for details.

MORE INFORMATION

hayinc.com.au





WA Young Sheep Handlers Expo, Perth

Attended and co-sponsored by AWI, the WA Young Sheep Handlers Expo was held at Claremont Showgrounds in Perth during three days in July. The 60 young participants from across the state were allocated a sheep for a hands-on handling and ringcraft experience. They also deepened their knowledge of sheep and wool – nutrition, reproduction, conformation, behaviour, and much more – and left with an enthusiastic understanding of the various career pathways in the industry. The day was attended by AWI Industry Relations Officer WA, Tennille Norrish.

Making More From Sheep eLearning course

Are you new to the industry and interested in learning about the key profit drivers in a sheep and wool enterprise? If so, take a look at the Making More From Sheep (MMFS) eLearning course. It's free and takes less than five hours to complete.

The MMFS eLearning course is based on the popular MMFS best practice package of information and management tools for Australian sheep and wool producers. Developed with input from leading sheep producers and technical experts, MMFS was originally launched by AWI and MLA in 2008 and quickly became one of the sheep industry's most recognisable and key sources of information.

AWI and MLA have continued their investment in the development of MMFS, making sure that it is up to date and includes the latest sheep industry research, tools and information on husbandry and management.

The MMFS information package has now been adapted into a high-level eLearning course. The course provides a flexible and easily digestible online

learning format for people looking for a foundational overview of the best-practice principles that sit behind a sustainable and profitable sheep and wool operation. It covers the same module topics as the MMFS information package:

- Plan for success
- Market focused wool production
- Market focused lamb and sheepmeat production
- Capable and confident people
- Protect your farm's natural assets
- Healthy soils
- Grow more pasture
- Turn pasture into product
- Boost business with breeding
- Wean more lambs
- Healthy and contented sheep
- Efficient pastoral production

Free to access, the course is available on AWI's online Woolmark Learning Centre platform which is a web-based hub that houses free educational resources about wool. Available at woolmarklearningcentre.com, the platform was originally designed for professionals in the global textile

industry, but is being expanded to include on-farm related courses. Other courses on the platform that are of interest to woolgrowers include *Wool price risk management*, and the ever-popular *Wool* appreciation course.

The platform allows learners to complete courses at their own pace. On completion of a course, users gain their own certification from the internationally recognised Credly digital credential platform, which can be displayed on the user's own digital professional portfolio such as LinkedIn.

MORE INFORMATION

woolmarklearningcentre.com makingmorefromsheep.com.au

Jamestown Junior Education Day, South Australia

The Education Day hosted by the Jamestown Agricultural, Horticultural and Floricultural Society brought about 150 students from across South Australia to the Jamestown Showgrounds in July to gain hands-on learning about sheep and wool production. Students had sessions on commercial sheep classing, wool and ram judging, show preparation and handling, and livestock health. They also saw demonstrations of shearing and wool handling by AWI-funded trainers from SCAA Shearer Woolhandler Training Inc. The day was attended by AWI Industry Relations Officer SA Shannon Donoghue who is also the secretary of the Jamestown Sheep & Wool Committee.





Guide to careers in the wool industry



o encourage more youngsters to consider a career in the wool industry, AWI has produced a 98-page guide that showcases the diverse range of roles within the wool industry: from farmhand to wool classer, AI technician to veterinarian, extension officer to livestock agent.

The *Your future in wool* guide provides the pathways that students can follow to embark upon the particular career in wool that interests them. There are lots of stories about real people working in the wool industry and they share some great tips about what it takes to be successful and make the most of the available opportunities.

The guide also includes a range of useful websites and handy decision-making tools to help students on their journey in the wool industry.

MORE INFORMATION

The booklet is available at info.wool.com/careers-booklet

Get connected online to AWI

AWI offers a range of online choices for Australian woolgrowers and other stakeholders to access the latest information about AWI activities – available on their computer, tablet or smartphone.





To ensure you keep up to date with the latest information from AWI, subscribe to AWI's monthly online Woolgrower Newsletter. Visit wool.com/subscribe or use the QR code for your free subscription.



Wool.com website

Wool.com is designed specifically for Australian woolgrowers seeking information from AWI on lifting their productivity. The website covers the full range of on-farm topics and has a strong focus on market intelligence and on-farm tools. You can also access industry news and corporate publications such as the AWI Annual Report and *Beyond the Bale*. The wool.com website received 334,714 visits during the 2024–25 financial year. Visit wool.com to view the website.

AWI e-newsletters

AWI produces several free e-newsletters:

- Wool Market Weekly Report, including weekly price movements and commentary
- Woolgrower Newsletter (monthly)
- Beyond the Bale e-newsletter (twice-yearly)

Visit wool.com/subscribe for your free subscription.

AWI social media channels

Followers at 30 June 2025 and percentage increase during the year, were:

f 12,599 followers (+13%)

X 8,044 followers (-%)

7,915 followers (+13%)

in 5,273 followers (+26%)

■ 4,383 followers (+8%)

AWI Extension Networks

AWI Extension Networks are present in each wool-growing state. They aim to increase the long-term productivity and profitability of producers. All woolgrowers are encouraged to get involved. All six AWI Extension Networks have their own website and social media channels. Visit **wool.com/networks** to connect with the AWI Extension Network in your state.

The Yarn podcast

AWI's *The Yarn* podcast is the wool industry's No.1 podcast. On *The Yarn*, you can learn more about AWI's projects from the people at the cutting edge of R&D and marketing. Each episode is about 20 minutes in length. *The Yarn* can be listened to at **wool.com/podcast**, Spotify and Apple Podcasts.

Woolmark digital and social channels

AWI subsidiary Woolmark also has a range of digital channels including the **woolmark.com website**, **e-newsletters** (visit woolmark.com/subscribe for your free subscription) and **social media channels** (Facebook, Instagram, LinkedIn, YouTube and TikTok) through which woolgrowers and other stakeholders can view the company's marketing initiatives.



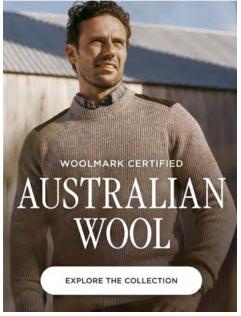
AUSTSHEAR

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GAZMAN collection highlights Australian wool





Well known Australian menswear brand GAZMAN has launched a Woolmarkcertified collection of garments made from Australian wool.

AZMAN is an Australian menswear fashion brand and retailer that provides contemporary and classic garments for all

generations. GAZMAN was launched in 1974 and is one of the most trusted menswear brands in Australia, having customer service, quality and value at its core.

The brand is part of the Australian and familyowned Austin Group, which also owns womenswear brand Cable (see the previous edition of Beyond the Bale) and women's designer clothing brand Perri Cutten.

In addition to its online store, GAZMAN operates a network of nearly 100 retail stores across Australia including in regional areas, from Armidale to Albury, Wangaratta to Wagga.

In May, GAZMAN launched a Woolmark-certified Australian wool collection. Named the Woolmark Edit, the collection featured a range of stylish and timeless jumpers and tops made from 100% Merino wool, 100% lambswool and wool blends.

"As an Australian-owned brand, we're proud to support one of our greatest natural resources, wool," said GAZMAN's General Manager Marketing & Customer Experience, Wesley Kerr.

"With our Woolmark range, we highlight Australian wool at its finest naturally soft, breathable, and made to last. It's a timeless material that reflects our commitment to premium quality, comfort, and effortless style.

"Woolmark certification gives our customers added confidence in the quality of our knitwear. It's a globally recognised symbol that reinforces the performance, durability, and care built

into every Woolmark-certified piece, which provides our customers with peace of mind."

GAZMAN's marketing campaign

GAZMAN's digital and social media marketing campaign included a promotion on the GAZMAN website's homepage, plus a landing page dedicated to the collection where all the products were featured and customers could purchase them.

There were also links to a page highlighting what Woolmark certification means and the benefits it provides for consumers, plus another page on how to care for Merino wool apparel including laundering and

In-store promotional collateral was also part of the marketing campaign, and the collection was featured in the GAZMAN winter catalogue, available in hard copy as well as online.

Training retail staff about wool

In May, Woolmark provided training about wool and Woolmark certification to 75 of GAZMAN's retail staff across two sessions, with a focus on the new collection.

"The session provided great information about wool's features and benefits, care, and sustainability," said GAZMAN's General Manager Retail, Sue Foyster.

"Our store managers were very impressed with the training content and delivery by Woolmark, with many commenting on their increased knowledge and confidence that they could pass on to customers.

"Some of our managers went on to visit the online Woolmark Learning Centre as they were keen to learn even more.

"The training session has now been made available to all GAZMAN team members and will form part of our onboarding training for new team members."

MORE INFORMATION

gazman.com.au/collections/woolmark-edit

GAZMAN's promotion of . Woolmark-certified garments made from Australian wool.

The Tasmania Devils support gear is made in Australia from 100% Australian Merino wool.



Vintage wool guernseys for Tasmania **Devils footy** club

Tasmania Football Club and Woolmark have launched a range of traditional footy guernseys made from 100% Australian wool for the club's supporters.

he Tasmania Football Club, nicknamed the Devils, is the latest professional Australian rules football club set to compete in the Australian Football League. In collaboration with Woolmark, the club launched vintage style woollen guernseys in July.

Made from 100% Australian Merino wool and crafted here in Australia, the long sleeve guernseys are available in men's, women's and youth styles. A sleeveless men's guernsey is also available. They feature a Tasmanian map logo with a traditional V neck red collar design and cuffs.

"The collaboration with Woolmark is one that we are genuinely excited about. To be able to create such special products made from 100% Australian wool for Tasmania Football Club members is a really special thing for our Club," said Tasmania Football Club General Manager Marketing, Public Affairs and Social Impact, Kath McCann.

"The wool industry is an important part of Tasmania's heritage, as is football. To be able to bring the two things together feels right. The products are of the highest quality and will not only be a statement piece, but something for collectors alike."

The guernseys are available at tasmaniafc.com for founding members of the club. There are currently well over

200,000 members, equivalent to about a third of the state's total population.

"We're delighted to be partnering with the Tasmania Football Club

because, not only is Tasmania a state steeped in football tradition, but it is also a state with a very strong presence in the wool industry," said AWI CEO, John Roberts.

"The garments have come up beautifully, showcasing wool's comfort, soft next-to-skin feel and temperature regulation. We are confident that they will sell extremely well and that all purchasers will be thrilled with the quality of the garment that they receive."

Promotion of the wool guernseys includes a video featuring sixth generation sheep farmer, Dougal Morrison, from 'St Peter's Pass' north of Oatlands who plays for the Mt Pleasant Football Club at Pawtella, and the club's president, Nick Weeding, who is a woolgrower at nearby 'Weedington' at Oatlands.

"Having wool in the Tasmania Football Club jumper is a great thing. It makes me proud and I think it's a great way to showcase Merino wool," said Dougal.

MORE INFORMATION tasmaniafc.com

AWI's Fibre of Football campaign

The new collaboration with Tasmania Football Club is part of AWI's broader Fibre of Football campaign, launched in 2014, which celebrates the rich heritage connecting the Australian wool industry and Australian football.

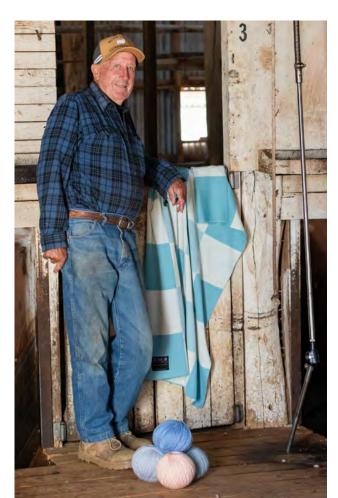
The idea for the sport of Australian football was sparked on a sheep station in the 1850s when the son of a pastoralist was thinking of how cricketers could stay fit over the winter. From Tom Wills' idea grew a game now enjoyed by millions across Australia and the connection between the fibre and the football has stayed close.

"Wool and Australian Football have supported each other throughout the evolution of our native game and our natural fibre. Footy is still played

where wool is grown and the local football team is still the centre of many wool-growing communities," said AWI CEO, John Roberts.

"During the past decade, some of the best AFL players that have connections to the Australian wool industry joined the Fibre of Football campaign to help promote the fibre – from Tom Hawkins and Nat Fyfe to Luke Breust and Patrick Cripps."

The campaign continues to promote 100% Australian wool heritage AFL merchandise manufactured locally in Australia. Supporter jumpers for the current AFL teams, made from 19 micron wool, are available from the official store of the AFL at theaflstore. com.au/pages/vintage-football-jumpers.



Woolgrower Tony Manchester with one of the blankets and some of the yarn made by Bendigo Woollen Mills using wool from his Corriedale flock. PHOTOS: Bendigo Woollen Mills.

Corriedale wool tells a good yarn

Quality wool products

The project started two years ago when Bendigo Woollen Mills Managing Director, Colin Walker, asked the team at G. Schneider to find him a high quality, singleorigin wool they could take to market and put a story behind.

Tony had sold some wool through the traditional wool sales with the help of David Quirk of Jemalong Wool and it was snapped up at a premium, starting a wider conversation with G. Schneider about how good the quality of the wool was.

After further discussions and help through David Quirk,

they put together a 20 tonne shipping container of greasy Roseville blood Corriedale wool, from Tony and Galorebased commercial breeder Geoff Lane. The wool was sent off to China for processing before returning to Australia to be made into quality woollen blankets, and now knitting yarns, for the Australian market.

Mr Walker says when he assessed the 23-25 micron Corriedale wool, with the

softness, style and amount of wool in each fleece, he knew this was the product he had been searching for – and one that had a good provenance story behind it, with massive 'farm to yarn' appeal.

"The use of the Roseville Corriedale wool in this context is really unique, as I strongly believe it easily outperforms

Merino wool and gives us a unique opportunity to leverage the fact there is no other product like it on the market,"

"The style of each wool type is what you have to work with in our business and this wool is the best I have ever seen and I truly mean that. I knew instantly it would run really well and this was an exciting product for us to build a brand around."

Exciting future ahead

Mr Walker sees a bright future with Roseville Corriedales and has ordered another container of the wool to expand the company's offering into scarves and beanies. The wool will be sourced through Tony and clients that buy his rams.

"This has opened up another market for my commercial producers to get on board and be part of the journey," Tony said. "It is very exciting times here at Roseville and we are extremely excited to see where this journey takes us."

Mr Manchester has bred Corriedales for 60 years and has worked hard on getting meat and shape into his Corriedale flock.

"We have worked hard on the meat side and created a lamb that hits the specs 75% of the time at top quality brands like Gundagai Lamb," he said.

"Off the back of getting my sheep right, we focused on the wool attributes and have drilled down hard on our coefficient

> variation and comfort factor attributes, which has tightened up the variation of our wool and we now produce a type of wool that is highly sought after and a sheep that has outstanding carcase qualities to go with it."

The 8-ply and 12-ply yarn, and two knitting patterns created for the yarn, plus the blankets, are available to buy on the Bendigo Woollen Mills website.

MORE INFORMATION bendigowoollenmills.com.au

Following the launch last year of 100% single-origin Corriedale wool blankets, Bendigo Woollen Mills has unveiled a new set of knitting yarns which is also made from wool grown by Tony Manchester of Roseville Corriedales at Young in NSW.

lifelong dedication by Tony Manchester Ato breeding Corriedales culminated in July in the launch of the knitting yarns at a special event held at Bendigo Woollen Mills in front of a packed gallery of yarn enthusiasts, industry leaders, media podcasters and wool lovers.

His passion for growing high quality Corriedale wool was evident at the launch with Tony saying that the event was one of the most emotional evenings of his life and something he will remember forever.

Bendigo Woollen Mills Marketing Manager, Kimberly Palmer, said the event was a great success, especially with the audience able to meet Tony face to face and discuss the product, where it came from, and how it was produced.

"Having a product like this in our range has made the yarners very excited to get their hands on it as soon as they can," she said. "The yarn is really lovely and soft, and this Corriedale wool is matching the softness of our premium Merino product range."



Vanessa Bell rings in the future for luxury Merino knitwear

Vanessa Bell, who with her husband, Philip, grows superfine wool near Walcha in northern NSW, last month launched her eponymous brand featuring Woolmark-certified knitwear made from 100% Australian Merino wool.

Vanessa says the guiding ethos behind the new Vanessa Bell brand is to create refined and timeless pieces that pay tribute to the wool fibre, the land on which it's grown, and the wearer.

"My vision has always been clear: to unite luxury with sustainability, and position natural fibres as the gold standard of modern fashion. A premium fibre, Merino wool holds the key to a more conscious future. Soft, strong and fully biodegradable, it offers luxury without compromise and performance without harm to the planet," Vanessa said.

The new collection comprises jumpers, scarves and tabards in colours inspired by the Australian landscape. All the pieces are knitted in Italy by family-run atelier Maglificio Pini using 100% Australian Merino wool yarns from Italian mills Tollegno 1900 and Lanecardate.

Vanessa chose to manufacture in Italy to honour generations of technical knowledge and to preserve the tradition of fine craftsmanship.

"These partnerships are essential to the brand's heritage and its commitment to responsible business practices. By pairing Australian wool with Italian hands, we highlight both land and legacy," she said.

Vanessa at home on the farm, wearing the Puff Wheat Turtleneck and Scarf which features the first-to-market puff stitch.





Vanessa Bell modelling the VB Signature Turtleneck. PH0T0S: Jasmine Moody from Moody Imagery

"Each piece of knitwear is easy to layer, flattering to wear, and finished with care. They are designed for comfort and ease, moving with you, from city to country, day to night. They are wardrobe staples that are designed to stand the test of time – to be worn and treasured for years, not just a season. They are made to be loved, re-worn and passed down.

"For me, true luxury is

over waste, to embrace

nature's miracle fibre in

comfort and beauty."

Vanessa Bell

timeless. Our knitwear is

an invitation to choose wool

"A highlight of the collection is the Puff Wheat Turtleneck and Scarf. The relaxed, chunky knit features a first-to-market puff stitch inspired by wheat and finished with the signature Vanessa Bell chevron detail."

All the pieces in the collection are certified by Woolmark.

"This means we meet the highest standards for fibre quality, strength and softness. We make garments to last: thoughtful design, responsible production, and lasting elegance."

Vanessa and her husband Philip run 3,500 Merinos at 'Emu Creek' at Walcha. Vanessa plans to include wool from the property in future collections of the Vanessa Bell brand.

"Our superfine wool is grown using regenerative practices like rotational grazing, restoring soil health, and protecting biodiversity. Sustainability is not a goal; it's how we work and think. We don't just reduce harm, we restore balance to land and animals. We're working with Land For Wildlife to restore native vegetation, planting trees and corridors to provide shelter and give native fauna space to move," she said.

Although Vanessa's knowledge of wool-growing began 12 years ago when she married Philip, her appreciation for wool first developed in the 1990s when she was a model for some of the world's top fashion brands.

"My love of Merino wool and

my relationship with wool actually commenced on the runway modelling for clients such as Valentino, Armani and Dior. In the 1990s, high-end designers were utilising superfine Merino wool in a way I thought beautiful and functional. I'm proud to say my very first shoot for *Vogue Australia* in 1989 was wearing a Merino blazer for Jean-Paul Gaultier. My passion for excellence in

quality and design stems from this fashion background," she said.

In 2017, Vanessa launched a collection of hand-knitted wool baby blankets which were inspired by her great-grandmother's knitting and a Merino

blanket passed down through generations. These early pieces laid the foundation for the new Vanessa Bell brand.

"After three years in the making, I am proud to launch my eponymous brand and I'm honoured that it has also been recognised with Gold in Fashion & Textiles and Silver in Agriculture & Farming at the international 2025 Women Changing the World Awards," Vanessa added.

MORE INFORMATION vanessa-bell.com

Wool hats that never felt better

Farmer and award-winning designer, Jo-Anne Barr, from the New England region of NSW specialises in creating hand-felted hats from Australian wool.

> o-Anne Barr from Currabubula on the North West Slopes of New England has been making hats for about 20 years. She established JAMB Hats and Millinery in 2018 when she worked as a traditional milliner, but in early 2022 began making her own felt to create felt hats – an art in which she is now a specialist.

Jo-Anne uses Australian wool fibres to handcraft a distinctive and wide range of hand-felted hats – from timeless fedoras and elegant cloches to cosy beanies and playful bucket hats. Custom made hats can also be arranged.

> "Wool is the gold standard for felting. The scales on wool fibres open with warm water and agitation, then tangle and lock in place," Jo-Anne said.

> "The 19 micron Merino wool I use, which I source mainly from Nundle Woollen Mill, is fine, soft and felts quickly. Polwarth wool has slightly broader fibres, which provides structure and strength so it's great for hats and sculptural felts. The Polwarth fibres are sourced from Tarndwarncoort in Victoria, which is where the Polwarth sheep breed was originally developed."

Unlike other felt hat makers that use commercially made felt hoods (unfinished hat bodies), Jo-Anne makes her own felt by hand using a technique known as wet felting.

"This is a traditional textile technique that involves matting together wool fibres from rovings to create a dense and sturdy fabric. This process is achieved

by using a combination of friction, water and soap. The felt is then put on a block and shaped by hand into hats of varying styles. Our hats don't contain any chemical stiffening agents unlike other felt hats on the market."

Jo-Anne works from her farm studios in Currabubula, where she runs her own farm, and Walcha, where her partner farms and together they have a strong connection with local woolgrowers.



"My enthusiasm for Australian wool comes from my passion for textiles and rural life. I enjoy the process of sourcing beautiful Australian wool fibres to create unique, stylish and functional hats," Jo-Anne said.

"My interest for textiles began at a very young age, with my grandmother teaching me to sew as a child. I studied textiles at school, went to Hawkesbury Ag College to study a Bachelor of Applied Science specialising in textiles, did a post grad in Education at UNE, then worked in a textile mill as a technician."

Her work within the textiles industry continued for many years but her career has also included teaching. To manage farm life and her hand felted hat business, Jo-Anne gave up full-time teaching in 2022 and since then has been a casual ag and textiles teacher in Uralla and Walcha.

Through JAMB Hats and Millinery, Jo-Anne also runs popular one-day felting workshops across Australia, at which participants can learn the art of wet felting with Australian wool and create their own hat, scarf or fashion accessory.

"I love taking these traditional skills to creatives and fashion enthusiasts alike in different locations there's something really powerful about sitting at a table, wool in hand, creating together and seeing their unique piece emerge," Jo-Anne said.

Her own felting skills continue to expand too. Last year, Jo-Anne won the Established Designers Encouragement Award at the Fleece to Fashion Awards in Armidale with an entry that featured a seamless felted coat, which is the first wearable garment she has ever felted, along with a felted fedora-style hat and a matching clutch.

MORE INFORMATION jambhats.com.au





Young Aussies witness China's huge investment in wool

The Australian young woolgrowers meeting the Australian Ambassador to China, Mr Scott Dewar, at the Australian Embassy in Beijing.

Eight up-and-coming members of the Australian wool industry visited China in May as participants in AWI's Australian Future Wool Industry Leaders program, and returned to Australia with optimism having witnessed China's high level of investment in the wool industry.



he Australian Future Wool Industry Leaders program is organised by AWI and is a key output from a grant provided by the Australian Government's National Foundation for Australia-China Relations (NFACR). As part of the program, eight young Australian woolgrowers undertook a 10-day study tour of the Chinese wool industry in May.

The program included visits to wool processors Tianyu and Sunwoo, yarn spinner Xinao, textile manufacturer Shanghai Challenge, and the vertically integrated Nanshan Group. It also included visits to the flagship stores of apparel brands ICICLE and Uniqlo, home textile manufacturer Wuxi JHT, the Wool Education Centre at Donghua University, and the Woolmark office in Shanghai.

The group was also welcomed in Beijing by the Australian Ambassador, Mr Scott Dewar, who provided his insights on Government-to-Government relations as well as the broader trade opportunities between the two countries.

Woolgrower Mitchell Rubie from Forbes in NSW said he and the other participants were greatly impressed with the high level of Chinese investment in the wool industry.

"It's an experience we will never forget and one we will all be sharing with family, friends and our wool industry connections in Australia. To see and hear personally from our major wool customers, who share





The Australian young woolgrowers witnessing the breadth and scale of the Chinese wool industry.

an affinity for the amazing product we produce on-farm, gives us encouragement that there is a good future in wool," he said.

This was the second Australian delegation to visit China on a study tour funded by the NFACR, following the visit by ten other young members of the Australian wool industry in September 2024. A further group will visit China in September 2025.

In April of this year, NFACR grant funding was also used to bring ten young members of the Chinese wool industry on a study tour of Australia during which they gained an increased knowledge of and appreciation for Australian wool.

"We greatly appreciate the Foundation's support for these study tours which will strengthen industry ties with Australia's biggest wool market. With this support and AWI's extensive business relationships in China, we are able offer these future wool industry leaders a unique business and cultural experience – one that will forge strong relationships into the future," said AWI CEO, John Roberts.

During a welcome for the group at the Australian Consulate in Shanghai by the Acting Consul-General, Ms Khadija Haq, the CEO of NFACR, Mr Gary Cowan, spoke of the importance of gaining an appreciation for the culture, customs and priorities of your business partners.

"The Foundation is delighted to see this group of young woolgrowers developing both trade and cultural connections here in China. Creating these links and sharing their passion for Australian wool is what strengthens our ties - now and into the future," he said.

The participants in the tour were Richard Branson, NSW; Charles Brumpton, Queensland; Thomas Campbell, Western Australia; Thomas Carlon, NSW; Veronike Hartmeier, NSW; Rachel Martin, South Australia; Ella Picker, NSW; and Mitchell Rubie, NSW.

Study backs wool for stop-go' sports

Woolmark is promoting the results of an AWI-funded study that proves 100% Merino wool base-layer fabrics provide excellent thermal comfort during outdoor 'stop-go' sporting activities, especially during resting phases when the potential for chilling is greatest.

Active outdoor sports such as hiking, cycling and rock climbing are also known as 'stop-go' sports because they encompass multiple activity and resting phases. Stop-go athletes sweat during the active phase, which is absorbed by their clothing, and this sweat then evaporates from the clothing during resting periods.

This evaporation has a cooling effect and can be uncomfortable. For example, a cyclist builds up a sweat during a hill climb, but is susceptible to chilling when resting at the top and/or cruising back downhill.

back downhill.

Anecdotal evidence from outdoor sportspeople has often indicated that only Merino wool base-layers

are comfortable at all stages of their sport, including before, during and after exercise, compared to base-layers made from other fibres. This concept, known as dynamic breathability, reflects how well a Merino wool garment adapts to changing

conditions: managing heat and moisture when the body is working hard, and preserving warmth when activity slows or stops.

Anecdotal evidence, however, often isn't convincing enough for many sports and outdoor brands. In the absence of objective, scientific research to validate this benefit, they have been reluctant to preference wool over other fibre types – hindering potential future demand for wool.

To address this knowledge gap and provide proof about the superiority of wool fabrics in next-to-skin activewear, AWI funded a major PhD study at North Carolina State University, a research leader in the textile space.

The results of the study provide the scientific evidence of wool's superior thermal comfort and suitability throughout *all* the phases of stop-go sports. AWI subsidiary Woolmark is now widely promoting these positive results for wool to sports and outdoor brands, and consumers.

"These research results are truly game changing and provide extra reasons for outdoor sports athletes to wear Merino wool especially as a base-layer," said AWI Program Manager, Fibre Advocacy & Eco Credentials, Angus Ireland.

"The results will be important in helping drive more sales of Australian wool. The research has already sparked interest from leading sportswear brands, seeking apparel designs that enhance wearer performance."

See page 48 overleaf for an example of a brand, Sierra Designs, using the dynamic breathability research in its marketing to consumers.

Study proves wool's superiority

The garments tested at North Carolina State University were made from 100% wool, cotton, viscose, and polyester – all of similar fabric weight and thickness.

Fast facts

- An AWI-funded study demonstrates that 100% Merino wool base-layer garments provide greater thermal comfort than other natural and synthetic garments during dynamic 'stop-go' sports – such as hiking, cycling and rock climbing. This is most noticeable during the resting phases of these sports when the potential for experiencing 'after-chill' is greatest.
- The study's four peer-reviewed papers have culminated in the submission of a new test method to the American Society for Testing and Materials (ASTM). Enabling clothing designers and brands to objectively measure and validate wool's thermoregulatory advantage over other fibre types was a key project goal

 an outcome that Woolmark's global marketing staff are now emphasising when engaging with sportswear brands.
- The study also indicates that sportspeople wearing wool use less energy to maintain their thermal equilibrium, than if they wear other natural and synthetic fabrics, leaving the athletes with more energy to use during their sport and competition.

The fabrics were each tested using 'sweating manikins' and then humans.

The **sweating manikin** studies demonstrated wool to be the fibre with the highest capacity to buffer a transition from an environment of 45% relative humidity to 80% relative humidity, with an impressive temperature buffering efficiency that is:

- 96% superior to polyester
- 45% superior to cotton
- 26% superior to viscose.

In the **human testing**, 12

students wore the garments during activity in a controlled climate chamber on an exercise cycle followed by resting in a simulated breeze to reflect outdoor circumstances. The subjects were asked to rate their comfort, thermal sensation, and wetness throughout each stage of exercise.

During the *activity* phases, no significant differences between the

fibre types were detected by the subjects. However, during the resting phases, the wearers' perceptions associated with fibre type became significant: The wool garment maintained significantly better thermal sensation and perceived comfort during the resting phases compared to all the other garments – see Figure 1.

Although the **polyester** fabric dried out more quickly, that did not translate into enhanced comfort. In fact, the reverse was observed, which can be attributed to a significant decrease in skin temperature. The wool fabric had stabilised thermal sensation after the first 10 minutes of resting but the polyester fabric was still trending cooler and less comfortable after 25 minutes and more.

The garments made from cellulosic based fibres, cotton or viscose, tended to perform midway between the extremes shown by the wool and polyester garments.

"The combination of wool's ability to absorb moisture vapour, generate heat and then only gradually release that moisture, together with its hydrophobic outer layer deferring rapid evaporation and cooling, were concluded to be responsible for wool's dominance," said AWI's Angus Ireland.

While quick-drying fabrics like polyester do lower humidity levels next to the skin, they do not lead to better outcomes for the athlete. The athlete

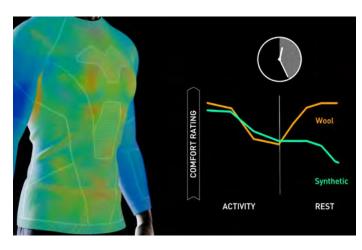


Figure 1: Comfort rating during activity and 25 minutes of rest

"Brands need to re-evaluate their focus on quick-drying sportwear and instead preference garments made from fibres, such as wool, that have been specifically designed by nature for dynamic activities."

Angus Ireland, AWI Program Manager, Fibre Advocacy & Eco Credentials

perceives rapid drying during the resting phase as uncomfortable because the rapid evaporation of sweat leads to chilling.

"Ultimately this study proves and reflects what outdoor sportspeople have said anecdotally for years: that wool maximises comfort during during all stages of their sport."

The study also indicates that athletes wearing wool expend less energy to maintain their thermal comfort.

"By using less energy to maintain their thermal comfort, the athlete that wears wool is left with more energy to use during their sport and competition," Angus said.

New fabric test to measure dynamic breathability

he research also demonstrated a way for fabric and apparel manufacturers and brands to objectively measure the dynamic breathability of fabrics. It uses a modified version of the apparatus

already used in the textile industry.

Most existing standard test methods that use the apparatus are 'steady-state' test methods and don't reflect the changing environmental conditions of real-world stop-go outdoor sports. But the AWI-funded researchers have modified the apparatus to emulate the environment of stop-go sports: a higher sweating rate, a higher wind speed, and three cycles of sweating/ no sweating.

The proposed ASTM test method has received significant support from sportwear brands, with many co-signing a letter of support encouraging the standards organisation to promptly adopt the changes.

MORE INFORMATION

woolmark.com/dynamic-breathability

Merino sleepwear eases effect of menopause

omen going through menopause can experience hot flashes, which during the night can lead to sweaty nightwear and uncomfortable chills when the moisture in the clothing cools.

This is a similar effect experienced by athletes during stopgo sporting activities. A solution is to wear the Merino wool clothing. The natural moisture management and thermoregulating properties of wool nightwear enable the wearer's body to maintain a more stable thermal comfort.

Merino wool nightwear can therefore help provide a more comfortable and uninterrupted sleep for women during perimenopause and menopause.



Merino sleepshirt from Sleepy Merino, a sleepwear and loungewear brand set up five years ago by woolgrower Julie Bird of Inverell in northern NSW (sleepymerino.co).

New Woolmark-certified base-layers in Korea



equilibrium during both exertion and rest. The video, which has received more than one million views on YouTube, is included on the Sierra Designs website.

Extract from a 70-second AWI video explaining how Merino wool helps wearers maintain thermal

> Notably, the campaign referred to the new dynamic breathability research results from Woolmark (see the previous double-page spread) – research that proved how well Merino wool base-layer garments adapt to changing conditions: managing

heat and moisture when the body is working hard, and preserving warmth when activity slows or stops. As Sierra Designs states on its website, the Merino wool "provides excellent body temperature regulation, allowing you to remain comfortable even in changing environments".

AWI Regional Manager Japan & Korea, Samuel Cockedey, says Sierra Designs, like many Korean sports and outdoor brands, are very interested in the natural benefits of wool and wanted to introduce it to consumers as a new material choice.

"Sierra Designs had not previously used wool in its products. However, it was inspired to use wool after meeting with our Korean team and learning more about the benefits of the fibre in outdoor sports," Samuel said.

"Woolmark in Korea introduced Sierra Designs to supply chain partners that produce the yarn and fabric that the brand was looking for. We also provided in-kind marketing support to Sierra Designs for its product launch.

'The fact Sierra Designs were interested in the dynamic breathability aspects of Merino wool and chose to highlight it in their marketing is testament to the value of AWI's investment in scientific research that proves wool's benefits."

Sierra Designs is owned by Exxel Outdoors, one of the largest privately-owned companies in the outdoor sports industry. In Korea, Sierra Designs was launched in 2022 through a licensing agreement with Hilight Brands which also manages brands such as Diadora, Kodak Apparel, and Malbon Golf. The Korean operation of Sierra Designs also manages the company's activities in China and Taiwan and plans to soon enter the Japanese market.

"We hope that this initiative with Sierra Designs will inspire other sports and outdoor brands in the region to introduce Merino wool into their product lines," Samuel added.

New wool-rich garments promoted by outdoor lifestyle brand Sierra Designs in South Korea.

Outdoor lifestyle brand Sierra Designs last month launched its first collection of Merino wool-rich apparel and accessories in South Korea, with support from Woolmark.

Sierra Designs was founded in 1965 in California, USA, and has since expanded into markets across the world, including South Korea.

In August, Sierra Designs launched a Woolmarkcertified collection of short-sleeve and long-sleeve tops, hoodies and accessories in South Korea. The launch was accompanied by a two-week online and instore marketing campaign, with in-kind support provided by Woolmark.

In its marketing campaign, Sierra Designs highlighted how the Merino wool in its garments makes them suitable for use during all four seasons of the year. It emphasised the thermo-regulating, moisture-wicking, breathable and odour-resistant qualities of Merino wool.

MORE INFORMATION sierra-designs.co.kr

Merino kit a smash hit for Venus Williams at the US Open

Venus Williams is tennis royalty, and the two-time Queen of Queens returned last month to the Arthur Ashe Stadium for her 25th campaign at the US Open, during which she wore a custom LUAR x Woolmark Merino wool performance kit.

ennis icon Venus Williams made her US Open return in a groundbreaking Merino wool performance kit designed by LUAR in partnership with Woolmark.

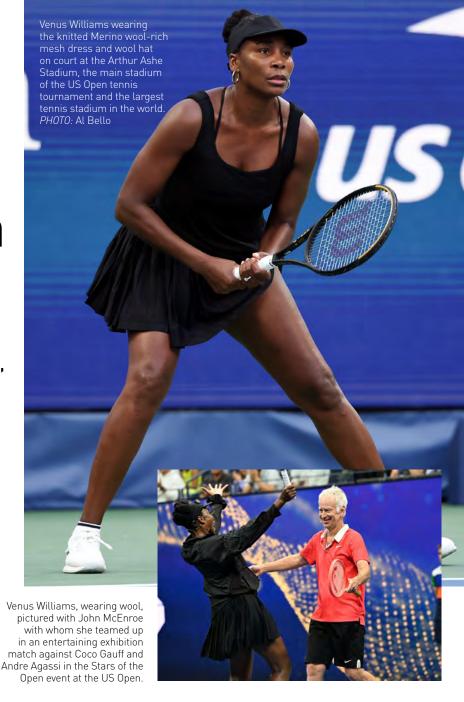
The collaboration brings together high fashion, elite sport, and natural performance innovation to challenge conventional expectations of both tenniswear and wool.

"We will continue our commitment to wool because we see its strengths: tech, versatility and legacy," said LUAR designer Raul Lopez.

"It's why Venus chose wool for her US Open kit – the fibre's natural performance qualities make it ideal for athletes, while its elegance translates seamlessly into fashion. Woolmark has been a key partner in our growth, and wool remains a fabric of choice across our collections."

Designed by LUAR, a Woolmark licensee and finalist in the 2025 International Woolmark Prize, the performance kit





showcases Merino wool's versatility through two distinct looks and functional wool accessories:

- Look 1: A striking black knitted Merino wool-rich mesh dress, crafted for on-court performance, and able to be styled with the LUAR Unbutton Track Jacket.
- Accessories: A water-resistant messenger bag crafted from 100% Optim™ wool fabric, combining utility with elevated design plus a wool hat and scrunchie to complete the look.
- Look 2: A beige Merino wool-rich twopiece knit skirt and top, designed for offcourt comfort and press appearances.

This partnership highlights Merino wool's place at the intersection of performance, sustainability and cultural expression. It also marks a continued

The Woolmark-certified waterresistant messenger bag crafted from 100% Optim[™] wool fabric.

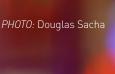
commitment from LUAR to use Merino wool as a cornerstone of the brand's design ethos.

Each piece has been developed in collaboration with Woolmark-certified supply chain partners, ensuring the highest standards in fibre innovation and garment construction.

"Merino wool is a natural high performer, making it ideal for the demands of modern tennis," said AWI CEO, John Roberts.

"Seeing Venus Williams bring this outfit to life on the court proves what we've always known: Merino wool doesn't just belong in performance wear – it excels in it. This collaboration with LUAR shows what happens when innovation, elegance and athleticism come together."

By bringing natural fibre innovation to one of the world's most-watched sporting stages, the LUAR x Woolmark x Venus Williams collaboration redefines what performance-wear can look and feel like.



First responders stretch their performance with wool

US company Burlington includes Australian Merino wool in its innovative Raeflex™ fabric that has 16-18% stretch and outstanding recovery. The fabric has been introduced into uniforms for several police agencies across the US.

The state of the s

Police personnel on the front line need a uniform that not only has a professional appearance but is also functional during their often long and active day.

"Burlington's Raeflex $^{\mathrm{TM}}$ fabric is a world class fabric for law enforcement and security personnel," said Burlington Uniform Director, Philip Brown.

"The innovative fabric combines increased levels of stretch and recovery in a durable, high-end Merino wool fabric for increased comfort and performance - all while upholding the professional appearance of a dress uniform."

Excellent stretch and recovery

Traditional uniform fabrics have historically been designed with two methods of stretch performance in their construction: (1) mechanical stretch, or (2) spandex stretch.

Mechanical stretch is provided by fabrics constructed without inherent stretch fibres (e.g. spandex, also known as lycra and elastine) – a twill weave for example will allow for some stretch, but it provides only limited mobility. Spandex stretch is provided by fabrics containing stretch fibres – the fabrics exhibit good stretch properties and average recovery or 'bounce back' to its original form.

Burlington's RaeflexTM fabric is different. This is because of its proprietary polyester/worsted wool stretch yarn technology known as PSR (Performance Stretch & Recovery).

"RaeflexTM uniform fabric has great stretch of up to around 18%, enabling unrestricted movement, and solid recovery that helps the fabric retain its original form wash after wash," Philip said.

"We blend our PSR yarn into the fabric to initiate stretch and use worsted long staple Merino wool yarns to add natural performance attributes. The fabric has enough stretch in the weft to allow performance, but less in the warp to help keep the uniform's professional appearance."

Benefits of including wool

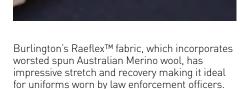
Philip says wool provides natural performance benefits to police uniforms, which could be worn for up to 16-hour shifts.

"Wool is the best fibre money can buy, especially for a police uniform. The fibre makes the uniform naturally self-extinguishing, provides natural odour protection, and is a great thermoregulator," he said.

There are currently four different RaeflexTM fabrics: a plain weave shirting fabric, and three weights of fabric for pants, each with a different type

"All the Raeflex™ fabrics are made of about 30% Australian Merino wool and 70% polyester," Philip explained.

"With this launch, Burlington demonstrates its capability to produce a world-class textile. Raeflex™ delivers the natural fibre comfort and resilience of Merino wool, combined with the



durability and easycare performance of a polyester blend."

Manufactured by **Burlington**

The Raeflex[™] fabric is produced by a combination of three Burlington facilities. Raeford for yarn production, Richmond for weaving, and Burlington Finishing Plant for the dyeing and finishing production.

Burlington provides fabrics to a wide range of public service organisations in the US, including state police, local police and fire departments, the United States Postal Service, Park Service and the Department of Homeland Security.

It is the largest producer of wool fabrics for the US military; every branch of the US armed forces plus military academies and other international armed forces use Burlington fabrics.

Burlington also manufactures fabrics for markets including activewear, medical, and personal protective equipment.

The Woolmark Americas team has a good relationship with Burlington with which it explores opportunities for growth in wool textile production and market demand.

MORE INFORMATION

burlingtonfabrics.com/raeflex

Building relationships builds demand in Japan



The marketing support provided by Woolmark to 13 brands of Japanese apparel group Sanyo Shokai helped increase consumer purchases of its wool rich knitwear and coats during the recent autumn/winter season.

Marketing of wool coats (left) and wool knitwear (right) from Sanyo Shokai brands. ©Sanyo Šhokai

Campaign results

123,000	wool rich items promoted
74,000 kg	of wool promoted (estimate)
13	brands involved
\$A40 million	worth of wool products sold

his was Woolmark's second marketing campaign with Sanyo Shokai, one of Japan's largest apparel groups with an annual turnover of about A\$600 million.

Following an initial joint marketing collaboration in 2023/24 with Sanyo Shokai's premium suiting brand Paul Stuart, Woolmark significantly expanded the collaboration to 13 more of Sanyo Shokai's apparel brands for the recent autumn/winter 2024/25 season.

Nearly 123,000 wool rich items of knitwear and coats were promoted during the three-month campaign from 18 October 2024 to 31 January 2025, which equates to an estimated 74,000 kg of wool. More than \$A40 million of wool products were sold.

"The marketing collaboration with Sanyo Shokai successfully increased Japanese consumers' awareness of Merino wool as a premium fibre and, importantly, increased their purchases of Merino wool apparel during the autumn/winter season," said AWI Regional Manager, Japan & Korea, Samuel Cockedey.

"This collaborative marketing project is a good example of the benefits that have been achieved by Woolmark fostering good relationships with large apparel

groups. Following last year's successful campaign with Paul Stuart, we were able to expand the collaboration this year to include many more apparel brands in the Sanyo Shokai group.

"Going forward, we anticipate the group will be

keen to undertake more large scale, multibrand marketing campaigns that highlight Merino wool's premium attributes and showcase the high quality of the group's supply chains."

The 13 Sanyo Shokai brands involved this year were: Amaca, Crestbridge Black Label, Crestbridge Blue Label, Epoca, Epoca Uomo, Evex by Krizia, Mackintosh London, Mackintosh Philosophy, Paul Stuart, Sanyocoat, The Scotch House, To Be Chic, and Trans Work.

Marketing campaign

The marketing collaboration, which targeted affluent male and female customers, comprised two online campaigns: one for Sanyo Shokai's two Crestbridge brands, and the other for the remaining 11 brands.

Both campaigns had a digital and social media component, with online traffic driven to dedicated hub pages for knitwear and coats on their two respective websites. In addition to highlighting the wool apparel products and where consumers could purchase them, the hub pages included information about Merino wool's benefits and Woolmark certification. Electronic mail about the wool products was sent direct to about 427,000 consumers.

The campaign received 19 million impressions (the number of times the campaign was seen online) and 108,000 click-throughs to the hub pages.

But wait, there's more...

The joint marketing collaboration with Sanyo Shokai is in addition to other collaborations undertaken by Woolmark in Japan during the autumn/winter 2024/25 season, all aimed at lifting demand for Merino wool apparel in this important market for wool.

Other marketing collaborations included those with:

- Japan's second largest luxury fashion e-commerce platform Rakuten Fashion to promote 2.3 million wool rich products from 790 brands
- five brands of the large apparel group **Onward Kashiyama** womenswear brands 23KU, Jiyu-ku, iCB, and J-Press Ladies and shoe brand Steppi
- popular womenswear brand UNTITLED
- sports goods giant Mizuno
- activewear brand Goldwin
- fast-growing contemporary womenswear brand ánuans
- iconic swimwear brand arena. See the previous two editions of *Beyond the Bale* for further information.

Growing interest in wool denim

Woolmark has launched a promotion of wool denim to the textile trade to help grow demand for wool in the casual apparel market. The promotion highlights how incorporating wool fibres into the traditional construction of cotton denim elevates the denim into a premium and high performance fabric.

Benefits of wool denim

Wool denim is as strong and versatile as regular cotton denim, but with the added natural benefits of wool including next-to-skin comfort, thermoregulation, moisture management, odour resistance, elasticity and wrinkle recovery.

In particular, wool's natural temperature-regulating properties make wool denim suitable for all seasons, keeping the wearer warm when it is cold, and cool when it is hot. For instance, wool on the inside of the fabric adds an extra element of warmth and takes the initial chill out of putting on regular denim jeans.

Dyed cotton warp yarns and undyed wool weft yarns is the most common composition for wool denim. However, newer combinations – such as wool-lyocell and wool-hemp – are increasingly used to offer unique advantages and applications. Wool denim is also available in a 100% wool fabric. There are also denim-inspired wool knits and jerseys.

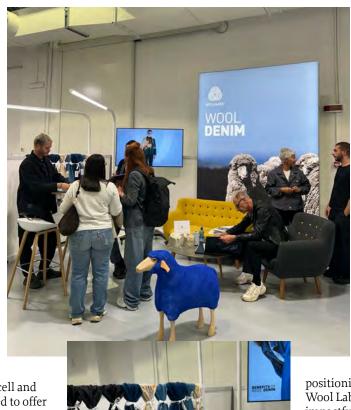
Recent advancements, including the use of machine-washable wool yarns, have made the production of wool denim fabrics easier and more cost effective to achieve, for a range of applications from jeans to shirting to suiting.

Woolmark's wool denim promotion

Woolmark has created a special edition of its The Wool Lab sourcing guide, containing 100 swatches of the world's best commercially available wool denim fabrics and yarns.

AWI General Manager, Processing Innovation & Education Extension, Julie Davies, says The Wool Lab Denim edition was launched in response to an increased demand for more sophisticated and sustainable denim fabrics.

"Over the past four years, we have seen a steady increase in requests for the wool denim samples seen in the regular editions



The Wool Lab Denim book and wool denim samples on display at the busy Woolmark booth at the Denim Première Vision trade show held in May.

of The Wool Lab. So we decided to issue this special edition devoted to wool denim to take advantage of this growing interest," Julie said.

"The Wool Lab Denim enables designers to explore wool denim with traditional patterns and subtle contemporary twists that offer a new perspective on a

familiar favourite. Or they can explore bold and imaginative interpretations of the denim look with distinctive prints, creative dyeing methods and unique finishing touches shifting wool denim into new, innovative dimensions.

"By providing this service, we help inspire brands' material strategies and forge strong relationships within the supply chain, thereby supporting the demand for wool."

The special edition of The Wool Lab was launched at the Denim Première Vision trade show held in Milan in May. This was the first time that Woolmark had exhibited at the event.

"A large and influential attendance, premium

positioning, and the high visibility of The Wool Lab Denim contributed to a highly impactful and well received participation by Woolmark at the trade show. There was strong engagement from brands, designers, and innovators throughout both days of the show and feedback was enthusiastic," Iulie said.

There was also substantial trade media coverage of Woolmark's attendance at the show and the benefits of wool for denim applications.

Woolmark will also exhibit at the large Bangladesh Denim Expo being held in November.

Woolmark has also developed a package of wool denim resources for the company's Business Development Managers to use when engaging with designers and brands at meetings, workshops, and trade shows across the world. The resources include a 24-page Wool Denim Toolkit, presentation slides, samples and imagery, as well as The Wool Lab Denim. The Toolkit and The Wool Lab are also available on the Woolmark website – see below.

MORE INFORMATION

woolmark.com/wool-denim woolmark.com/thewoollab



International Woolmark Prize (IWP) winner Edward Crutchley has designed a nine-piece wool denim collection to showcase how Merino wool can redefine the cultural icon.

together narratives including the functional layering worn by Australia's woolgrowers.

Signature looks include bush hats styled with padded jackets, dark denim trench coats layered over laser-washed jeans, and sharply tailored silhouettes that showcase

wool's natural drape, structure, and thermal versatility.

"Neither wool nor denim are traditionally seen within the outerwear category of streetwear," Edward explained. "So I treated this as the key challenge of the project – to find ways in which the unique qualities of wool and the heritage and atmosphere created by denim could bring something new to this category; one which has been growing significantly over the past few seasons.

"The results clearly show how suitable wool denim is for coats and padded jackets. In fact, it's made me realise that there is so much more potential for wool denim in outerwear than I have previously thought possible."

MORE INFORMATION

woolmark.com/future-denim

IWP winner's fresh take on a timeless textile

Raised on a sheep farm in the Yorkshire Dales in England, Edward Crutchley is now one of the world's leading fashion designers, who has worked on the international stage for Louis Vuitton, Fendi, and Christian Dior. In 2019, he won both the Menswear Award and the Innovation Award of the 2019 International Woolmark Prize.

"Denim stands for so much; from workwear to youth cultures, it is the cornerstone of so many wardrobes. Wool denim stands for even more. The addition of wool adds both luxury and versatility, giving denim a

newness and adding to its

adaptability and beauty"

Edward Crutchley, fashion designer

His latest collaboration with Woolmark is on a project titled 'Wool Futures: The Future of Denim' which aims to encourage

> the textile and fashion industries to use more wool denim. Inspired by The Wool Lab Denim edition and the Wool Denim Toolkit, Edward has used artificial intelligence (AI) to reimagine the enduring appeal of denim through the lens of Merino wool.

> The result is a ninelook collection of bold, future-facing designs. The collection weaves

Examples of commercially available wool denim apparel



The Woolmark display at the Printemps department store.



Wool on show at famous Parisian department store

Woolmark has partnered with the No More Plastic foundation as part of a 21/2 month pop-up display at the famous Printemps Haussmann luxury department store in Paris, showcasing wool as a natural alternative to synthetic fibres.

Printemps Haussmann is an iconic department store in downtown Paris that attracts 1.83 million shoppers every month. The No More Plastic foundation, a not for profit organisation with a mission to prevent plastic/microplastic pollution and promote sustainable alternatives, teamed up with Printemps in April to highlight plastic-free fashion solutions.

A pop up display was installed at the front of the store, at which Woolmark highlighted to shoppers wool and its premium, natural benefits. The display was launched on 22 April to coincide with Earth Day and ran until early July.

Products from two of Woolmark's partners were incorporated in the display: Merino wool swim shorts from iconic French swimwear brand Vilebrequin, and Circle Sportswear's SuperNatural Runner which have an upper and tongue crafted from 65% Merino wool. Both products are available to purchase at Printemps. As part of the display, Woolmark also showcased different categories of wool from the raw fibre through to wool top.

As part of the initiative, Woolmark also took part in sustainability-focused talks to

Promoting wool's benefits over plastic

With plastic pollution causing increasing concern across the world, Woolmark is highlighting the biodegradable benefits of wool to the public. Here we provide a snapshot of two recent examples of activities undertaken by Woolmark in France.

highlight the natural, renewable and biodegradable benefits of wool. The eco-credentials of wool were amplified across the partners' digital and social media.

"The initiative placed wool front and centre of shoppers' minds and educated them about wool's eco credentials, highlighting

that unlike synthetic fibres wool readily biodegrades and does not contribute to plastic and microplastic pollution," said AWI Regional Manager Western Europe, Damien Pommeret.

"The project provided Woolmark with a great opportunity to align with No More Plastic, a foundation that shares our own values in highlighting more eco conscious consumption, as well as help Woolmark build a productive and enduring relationship with the iconic retailer Printemps."

Woolmark winning the gold award at the Deauville Green Awardas film festival.

Wear Wool, Not Waste film wins gold award in Paris

Woolmark's Wear Wool, Not Waste campaign film in June won the gold award in the conscious consumption category at the Deauville Green Awards, an international film festival dedicated to environmentally and socially responsible audiovisual productions.

Held in Paris, the event brings together hundreds of international films and key industry professionals for screenings,

round tables and masterclasses. Woolmark's campaign film received a very positive reception amongst attendees.

The Wear Wool, Not Waste campaign's 60-second hero film shows people in a city rushing to escape a massive 'zombie invasion' of old synthetic clothes, representing synthetic apparel that remains polluting the planet long after they have been discarded.

Importantly, the campaign also highlighted that wool has unparalleled advantages due to it being natural, renewable, biodegradable and the most recycled apparel fibre - and therefore a solution to reducing the fashion industry's impact on the planet.

There have been more than 68 million views of the campaign film worldwide, which is almost double the target of 36 million views. Watch the film at

woolmark.com/wear-wool.

Beyond the official competition for professionals, the Deauville Green Awards was also an event for the public. Woolmark participated in a roundtable discussion on the topic of 'Fast Fashion: problems and solutions' with key industry figures and influencers. Woolmark Regional Manager Western Europe, Damien Pommeret, was on the panel along with President of the French Federation of Women's

Ready-to-Wear, Yann Rivoallan, and Claire Latour who co-wrote and starred in the documentary Shein, Investigation into the Fast Fashion Giant, broadcast on France TV.

'Woolmark's Wear Wool, Not Waste campaign has proved an effective way to promote wool over fast fashion synthetic fibres. It has reshaped consumer perception about synthetics and wool, helping make fabric choice a crucial part of sustainable fashion decisions," Damien said.

The campaign has also won other prestigious international awards including the gold award in the creative category at The Drum Awards for Marketing in June.



The new QuantumCOLOUR™ technology enables the colouration of wool and wool blend yarns with less cost and a smaller environmental footprint than traditional dyeing.

With the textile industry increasingly focused on minimising its environmental footprint, Woolmark is seeking ways to ensure that wool textile production minimises the consumption of resources and the production of pollution.

One of the areas of textile production that Woolmark has been looking at is dyeing, which traditionally requires a variety of chemicals, including caustic soda, acids, bleach, and salts, all washed with between 60 and 120 litres of water per kilogram of yarn.

Woolmark has joined up with COLOURizd™, an innovative US-based company that has developed a revolutionary yarn colouring process called QuantumCOLOUR™ that significantly reduces resource consumption, pollution and costs.

Benefits of **QuantumC0L0UR™**

- Significantly reduced water consumption
- Reduced use of chemical treatments
- Lower energy use
- Streamlined colouring
- Decreased chemical wastage
- No effluent or wastewater discharge
- Elimination of colour variation
- Simpler colouration of multiple fibre types.

Rather than being a traditional wet colouring process, QuantumCOLOUR™ operates in a 'dry' factory environment. Using just 0.5 litres of water per kilogram of yarn, this technology eliminates the need for bleaching, pre-treatment and wastewater discharge.

Instead of using traditional chemicals, it only uses wetting agents, and an optimum dosage of non-harmful, bluesign®-certified pigment and binder injected into a raw yarn fibre bundle, minimising chemical wastage. The process is streamlined and happens at room temperature, thereby significantly reducing resource consumption.

The QuantumCOLOUR™ process has been tested to

meet Woolmark's quality control standards for colourfastness and durability. The technology has been successfully validated on 100% Merino wool,

Wool passes with flying colours

as well as blends with cotton, TENCEL™ and nylon, and on a range of yarn counts.

Another benefit of this cutting edge process is that it eliminates the variability commonly associated with conventional dyeing techniques, such as shade bands. Its ability to colour multiple fibre types in a single pass eliminates the complexity and cost typically associated with cross dyeing, a process that often leads to inconsistency and high resource consumption.

The process enables the production of wool and wool blend yarns in a full spectrum of colours and diverse shades for both knitted and woven textiles across apparel and homeware.

"After extensive testing on Merino wool and wool blends, we realised the team at COLOURizd is on to something truly revolutionary for the wool industry," said AWI General Manager, Processing Innovation & Education Extension, Julie Davies.

"The QuantumCOLOUR™ process provides durable solutions, creating faded to saturated tonal depths of colour for wool and wool blends. And since it uses very little water, suppliers can choose to colour wool and wool blend yarns without the need for wastewater processing infrastructure.

"The availability of this new technology that is suitable for wool and wool blend yarns will help support brands' sustainability initiatives and the demand for wool."

Woolmark and COLOURizd highlighted the QuantumCOLOUR™ technology at the Pitti Immagine Filati trade show held in July in Florence, Italy, and showcased a capsule collection of wool garments (see the above image) that had been coloured using the technology.

"Woolmark represents the gold standard within the wool industry and they will be instrumental in helping to offer our lower impact, higher performance process to new markets," said CEO of COLOURizd, Jennifer Thompson.

"Our current clients include Kontoor Brands (Wrangler and Lee), Cone Denim, and GANT, and working with Woolmark will allow us to reach an entirely new market, bringing sustainability and performance solutions to wool manufacturers around the globe."

MORE INFORMATION woolmark.com/colourizd



ounded in 1837, the year in which Queen Victoria succeeded to the British throne, Abraham Moon & Sons is one of the UK's leading woollen and worsted manufacturers, creating premium wool fabrics for both apparel and interiors.

All its fabrics are manufactured in its fully-vertical mill that is based on the original Victorian-era site at Guiseley in Yorkshire. By manufacturing from a single site, Moon is able to control every stage of the production process to ensure the highest standards – from the dveing and blending of wool fibres, to spinning, weaving and finishing of fabrics.

Moon was founded on the wool trade, and wool - broad wools and Merino remains the predominant fibre used by the company, with many of its fabrics made from 100% wool.

"Wool is a fantastic fibre that we are very passionate about. It has a range of impressive inherent properties that make it so versatile in fabrics," said Moon's Brand & Product Director, Joe McCann.

"Moon has been a private family-owned company ever since it began 188 years ago. We employ more than 200 people and we are proud of our 'Made in Britain' heritage, which is exhibited in the style of fabrics we produce with their quintessentially British look."

Moon is well-established within the apparel trade which remains the cornerstone of its business. Its fabrics are sold to fashion labels, designers and brands worldwide for use in apparel such as jackets, coats and tailoring. The company boasts a customer base of many top fashion houses,

including Ralph Lauren, Dolce & Gabbana, Burberry, Paul Smith and many more.

"However, around 20 years ago Moon decided to utilise their extensive yarn offering that was used in their apparel fabrics to create fabrics specifically for the interior industry. Their extensive knowledge of designing and producing innovative fabrics positioned Moon as one of the go to brands for woollen interior fabrics. The inherent performance and character of wool lends itself to many applications such as upholstery, cushions, curtains, throws and blankets," Joe said.

"Such was the growth in business that interior fabric now makes up a significant amount of our annual production. While the volumes of apparel fabrics vary during the year and year-to-year depending on the season and fashions, our interiors business has a more consistent production throughout the year.

"We produce multiple new interiors collections every year. Our wool fabrics are used internationally in residential, contract and hospitality projects, from 5-star hotels to even 10 Downing Street."

Moon fabrics are renowned for their beautiful colour palette. The company can dye wool in more than 500 different shades and colours, using precise combinations of dye, pressure, temperature and time. Up to seven different coloured wools can be blended together in each yarn to create their unique and appealing rich colour.

The company is capable of weaving 25,000 metres of cloth per week. After the fabric is woven, each piece begins a strict

quality control process. Moon's staff closely inspect the fabric at three stages in the manufacturing process – when it comes off the loom, after the finishing process, and again before it leaves the factory.

Quality is at the core of everything the company does. To provide its customers with an independent assurance of quality, Moon is a Woolmark licensee. Woolmark certification guarantees durability, performance and quality.

Although heritage and quality form a significant part of the Abraham Moon narrative, the company is also focussed on sustainability – from the fibre, through manufacturing to the final product.

"We are proud to be a British manufacturer that uses such an ecofriendly material, wool, which has natural, renewable and biodegradable benefits. Wool of all microns are well placed to take advantage of the market trend towards sustainability," Joe said.

"We source our wool from across the world including from here in Britain. We make every effort to ensure that the raw wool is only from reputable sources, which includes prioritising animal welfare. Part of our approach includes certifications; the company buys RWS wool. However, we recognise that the costs and administration needed to gain certifications can be a burden on woolgrowers, and we don't want traceability to just be an exercise in ticking boxes.

"Traceability is about working more directly with woolgrowers, to learn what they're doing with their land and



Wool - the perfect choice for interiors

With the perfect mix of natural performance, strength and comfort, wool can play an increasingly large role in interiors: in homes and properties such as offices and hotels, and in products as far ranging as upholstery, curtains, bedding, rugs, lighting, and decorative objects.

As well as the consumer trend towards sustainability, the movement towards health and wellness is another big trend that plays in favour of wool. Wool has a luxurious finish and is resistant to odours, stains and flames, and it provides thermal and acoustic insulation – making it a natural choice for any interior.

The volume of wool globally used for interior textiles continues to climb above the volume of wool used for apparel. For a few decades prior to 2007, the split favoured apparel over interiors, but about 55% of all wool is currently used for interiors with 45% used for apparel.

Although Australian wool is traditionally renowned for its use in apparel, there are plenty of options for interiors, too – not only for broad and crossbred wool but also for Merino.

sheep, and build productive two-way relationships with them. This can also provide a more authentic narrative in our marketing which is very important to us."

Moon's approach to sustainability extends to the operation of the Guiseley factory itself. For instance, it has more than 520 solar panels installed across the roof of its mill and energy-efficient LED lighting installed throughout its site. Waste selvedge and unusable fabric scraps are collated and pressed into bales to be collected in bulk for recycling.

"Paired with our continued efforts towards responsible sourcing, waste and resource management, we aim to deliver products of the highest ethical quality as well as performance quality," Joe added.



The latest edition of AWI's Broader View publication for non-Merino woolgrowers.

AWI's support for broader micron wools

The latest edition of AWI's Broader View publication provides an overview of how AWI's marketing and on-farm R&D and extension activities support producers of non-Merino wool.

n the 4-page Broader View, published in June, AWI CEO John Roberts says AWI's on-farm R&D and extension projects largely benefit all Australian woolgrowers, irrespective of the breed of their sheep and micron of their wool.

"Most of our on-farm R&D projects also benefit growers of broader micron wool, including projects aimed at increasing the reproductive efficiency of ewes; optimising sheep health and welfare; making wool harvesting easier; environmental sustainability; combatting wild dog, fox and feral pig attacks; and harnessing opportunities for on-farm automation," John said.

"In addition, we deliver practical training programs through our extension networks in each state to increase producers' adoption of best practice on-farm production and management."

John also says AWI's marketing of Australian wool, irrespective of the micron, helps support the demand for all wool including broader wools.

"For example, our marketing of wool's eco-credentials, its breathability, fire resistance and anti-odour properties applies to all Australian wool: broad, medium and fine," he said.

"The decline in wool prices for the broader microns in Australia ended about two years ago and prices have been recovering ever since (see page 59), albeit slowly and from a low base. I believe the fundamental benefits of wool and long-term consumer trends play in wool's favour."

MORE INFORMATION

wool.com/broaderview2025

Market intelligence report

Here we look at the 2024-25 season statistics for Australian wool, which show decreasing production volumes, recovering prices, and China's continued dominance as an export destination.

Australian 2024–25 wool production by volume

Table1. AWTA key test data for the 2024-25 season

	2024-25 (tonnes)	2023-24 (tonnes)	YOY difference (tonnes)	YOY difference (%)	% of national 2024–25 total
New South Wales	114,069	122,691	-8,622	-7.03%	38.6%
Victoria	69,557	76,629	-7,072	-9.23%	23.5%
Western Australia	49,921	63,338	-13,417	-21.18%	16.9%
South Australia	43,703	51,921	-8,218	-15.83%	14.8%
Tasmania	10,099	11,130	-1,031	-9.26%	3.4%
Queensland	8,081	8,992	-911	-10.13%	2.7%
TOTAL	295,430	334,701	-39,271	-11.73%	100%

The Australian Wool Testing Authority (AWTA) tested 295.4 million kilograms (mkg) of greasy wool during the 2024–25 season, an 11.7% reduction in wool tested compared to the previous season.

All states had decreases. The biggest production loss was in Western Australia, down 21.2%, due to a combination of

trying growing conditions alongside producers adjusting their land use due to changes in Government policy. Despite this, WA remains the third largest producing state at 16.9% of national production. Drought-affected South Australia also saw a big fall in production, down 15.8%.

NSW and Victoria were responsible for 62.1% of national production (59.6% in previous season), with the dominant producing state of NSW accounting for 38.6%, but still down 7.0% in volume for the year. Tasmania (down 9.3%) and Queensland (down 10.1%) also had decreased production, partly due to adverse growing conditions, drought and flood respectively.

Wool selling volumes at auction for the 2024–25 selling season compared to the previous season saw:

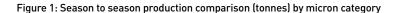
- **14.26% less wool offered** 1,541,414 bales offered compared to the 1,797,792 bales offered in the previous season, a drop of 256,378 bales.
- **14.46% less wool sold** 1,419,576 bales sold compared to the 1,659,497 bales sold in the previous season, a drop of 239,921 bales.
- Slightly lower clearance rates at **auction** – 92.10% compared to the 92.31% cleared in the previous season.
- 13.32% drop in raw wool value, approximately A\$298 million less **clip revenue** – A\$1.940 billion sold in 2024–25 through the auction system compared to the A\$2.238 billion sold in the previous season.

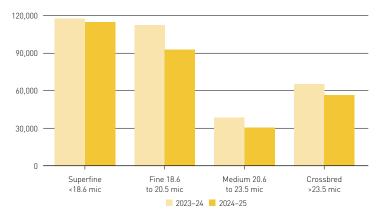
Australian 2024–25 wool production by micron

For the 2024-25 season, 39% of the Australian wool clip by greasy weight was tested by AWTA in the superfine category of finer than 18.6 micron. This is the highest ever production percentage of the clip recorded as superfine. Despite the total Australian wool clip being 11.7% lower, the superfine sector was just 2.3% below last year's volume.

Fine wool of 18.6 to 20.5 micron comprised 31.5% of the Australian clip (17.4% lower volume than the previous season), whilst just 10.4% of the clip was the medium wool types of 20.6 to 23.5 micron (20.8% lower volume than the previous season).

The volume of broad/crossbred wool greater than 23.5 micron fell by 13.6% compared to the previous season. Interestingly, the percentage of the total





Australian clip for broad/crossbred wool fell from the previous season's 19.6% to 19.2% in 2024–25. Although wool greater than 23.5 micron accounted for 19.2% of the Australian wool clip by volume, it represented 7% of greasy wool value.

Australian wool prices in 2024-25

Figure 2: 2024-25 season wool prices (\$) - Merino sector

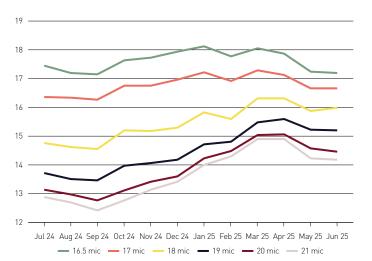
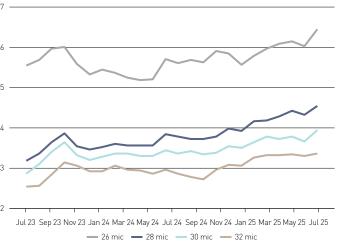


Figure 3: Two season wool prices (\$) - crossbred sector



Since the start of the 2024–25 season, Merino types of 18 micron and broader have recorded handy seasonal gains of between 8.3% and 10.7%. This means prices within this wool type segment (which is the majority of the Merino clip) are 120 to 150 ac/clean kg better than at the start of the season.

The largest gains have centred more so around the 19 to 22 micron areas, as supply of these types lowered, partly due to the dry conditions which have pushed the general micron profile of the clip lower.

Merino wool types and descriptions finer than 18 micron have largely traded at around the same levels. The 16.5 micron indicator closed at values 1.4% lower than seen at the start of the season. This was the only quality that saw a decline in value.

Apart from a few of the best spinners types, the superfine market for the past three to six months has largely been the domain of the Chinese and, to a lesser extent, Indian manufacturers. The Italian weavers have been very sparing and discerning in the volume and quality of wool being sought.

The crossbred wool market has steadily climbed for the past two years. Around 32% of value or about 104 ac/clean kg has been added to grower returns on average across the sector. The 32-micron indicator has increased by 32.2% in value, the 30-micron indicator by 37.5%, and the 28-micron indicator by 42.6%. The 26-micron indicator still managed a healthy gain of 16.2%.

Gains in this sector are indicative of advancements in the use of wool in homewares and interiors markets. Additionally, more affordable coats and outerwear apparel are being sought by shoppers looking for value.

These crossbred wool price improvements are coming off historically low price levels and are still massively below profitability levels required as a standalone production item, without factoring in the meat. But most growers are now able to get returns from their adult wool sheep that could at least go towards recovering the shearing costs. Shearing in this area of sheep production is now largely considered a management tool.

Australian wool exports in the 2024-25 season

Table 2: 2024–25 season export destinations for Australian wool

	Volume	Value
China	86.8%	84.4%
India	5.4%	5.3%
Italy	2.4%	4.3%
Czechia	2.1%	1.8%
Others	3.3%	4.1%

According to the Australian Bureau of Statistics (ABS), China's percentage share of Australian wool imports by volume in 2024–25 increased from 86.4% to 86.8%, although its import volume was 11.7% (33 mkg) lower than in the previous season. China's percentage share of Australian wool imports by dollar value has also increased, from 84.1% to 84.4%, although its import value was 8.7% lower.

India increased its share of volume, from 5.1% to 5.4%, although its volume was 6.1% (1 mkg) lower than in the previous season. India also increased its import share by dollar value from 4.9% to 5.3%.

Whilst Italy's volume share is very low at just 2.4%, it is 4.3% of the value when looking at export earnings. However, 4.3% is still a disappointing figure, because until recently it was usually well above 12% of Australia's export value.

A noticeable change came from Czechia which lifted its market share by dollar value by 20.5%. This was because that export destination shifted a larger portion of its buying from the crossbred wool types into the purchase of more Merino wools, but moreso reflecting the price gains of the broad wool sector over the past 12 months.

MORE INFORMATION wool.com/marketintel

Use the NWD to attract the highest price

All woolgrowers are being urged to complete the National Wool Declaration (NWD), as wool sold as Not Declared usually receives a discount. The NWD provides transparency to buyers and the whole supply chain and helps woolgrowers earn premiums and avoid discounts for their wool.

Key messages

- To attract the highest price for their wool, all woolgrowers, regardless of their Mulesing Status and wool type, should ensure that their wool is accompanied by an NWD. Failure to complete an NWD has usually resulted in the wool being discounted.
- During the 2024/25 season, 58.6% of all Tas wool and 54.4% of Tas Merino wool was either Non Mulesed (NM) or Ceased Mulesed (CM). Qld is not far behind, with 47.9% of all its wool either NM or CM and 47.0% of all it Merino wool either NM or CM.
- Nationally, declaration rates for NM wool continue to climb (currently 22.7% of all wool: 16.5% of Merino wool).
- Of the Merino wool that is declared as Mulesed (M) or Mulesed with Analgesic &/or Anaesthetic (AA), AA now makes up 87.2%.

he National Wool Declaration (NWD) enables woolgrowers to communicate directly with prospective buyers, processors and retailers; and them send key wool market messages back to woolgrowers.

Whenever AWI discusses the Australian wool industry's animal welfare practices with brands and retailers along the supply chain, they invariably say that they would very much like all Australian woolgrowers to declare their wool through the NWD; it creates two-way transparency, choice in the marketplace, and price signals back to growers.

Once a woolgrower has completed the NWD, which is voluntary, the contents are converted for inclusion in sale catalogues and test certificates. All woolgrowers are encouraged to complete the NWD, regardless of their sheep's breed and wool type, and husbandry practices.

Table 1. NWD declaration rates (%) by Mulesing Status and state for season 2024/25 for all wool

Mulesing Status	NSW	Qld	SA	Tas	Vic	WA	National	
NM	27.5	43.8	13.5	52.9	25.8	7.1	22.7	
СМ	2.5	4.1	3.1	5.7	3	0.7	2.6	
LN	0.1	0.0	0.1	0.0	1.1	0.0	0.2	
AA	44.9	33.5	55.9	24.1	44.8	38.7	44.5	
М	6.8	6.5	8.5	3.2	4.3	8.6	6.8	
ND	18.3	12.2	18.9	14.1	21	44.9	23.2	
Total bales	512,684	40,088	202,836	41,561	250,062	216,830	1,264,061	
% declared	81.7	87.8	81.1	85.9	79.0	55.1	76.8	

The NWD declaration rate increased by 1.2 percentage points during the 2024/25 season to be 76.8%. Five states improved their declaration rate: Old (+3.9 percentage points), NSW (+2.5), Vic (+0.8), Tas (+0.7), SA (+0.5). However, there was a decrease for WA (-3.4 percentage points). Old woolgrowers now top the list for declaration rates at 87.8% of wool sold, followed by Tas woolgrowers at 85.9%.

The WA declaration rate had the lowest declaration rate at 55.1%.

Tas and Qld woolgrowers also top the NM categories at 52.9% and 43.8% of wool sold (which has been the case for a long time). These two states have the most NM wool as the risk of flystrike is lower; the weather in Tas is cool and Qld is hot with much shorter fly seasons.

Table 2. NWD declaration rates (%) by Mulesing Status and state for season 2024/25 for Merino wool

Mulesing Status	NSW	Qld	SA	Tas	Vic	WA	National	
NM	19.6%	43.1%	9.3%	46.7%	17.5%	6.0%	16.5	
СМ	3.0%	3.9%	3.1%	3.1% 7.7% 3.8%		0.7%	2.8	
LN	0.1%	0.0%	0.1%	0.0%	1.6%	0.0%	0.3	
AA	55.1%	34.3%	62.9%	33.2%	58.9%	40.3%	52.6	
М	8.1%	8.1% 6.6%		9.0% 4.5%		8.9%	7.7	
ND	ND 14.1% 12.0%		15.6%	7.9%	13.1%	44.0%	20.0	
Total bales	bales 402,046 39,018		170,757	29,099	166,850	205,874	1,013,644	
% declared	6 declared 85.9 88.0		84.4	92.1	86.9	56.0	80.0	

Merino wool declaration rates continue to improve nationally, up 0.2 percentage points to 80.0% for the 2024/25 season. Four states improved their declaration rate (Merino): Qld (+3.8 percentage points), NSW (+2.3), Vic (+0.6), SA (+0.4). However, there were decreases for WA (-3.4 percentage points) and Tas (-0.5). Tas woolgrowers still top the list for declaration rates (Merino) at 92.1% of wool sold followed by Qld woolgrowers at 88.0% and Vic at 86.9%.

Compared to the previous season, the national Merino clip declared as NM rose to 16.5% (up 1.2 percentage points). Tas

rose by 4.2 percentage points and has the highest rate of all states at 46.7%, followed by Qld which rose by 2.3 percentage points with now 43.1% (Merino) declared as NM. The other states also increased their NM declaration rate (Merino): Vic (+1.2 percentage points), NSW (+0.6), SA (+0.5), WA (+0.1).

Nationally, AA declarations (Merino) were up 1.7 percentage points to 52.6%. M declarations (Merino) have reduced by 1.4 percentage points nationally to 7.7%. Of the Merino wool that is declared as M or AA, AA now makes up 87.2% and M now down to 12.8%.

Table 3. NWD declaration rates (%) by Mulesing Status and breed/micron (µm) for season 2024/25

Breed			Merino			Crossbred				
Mulesing Status	<18.6	18.6- 20.5	20.6- 24.6	>24.6	Total	<18.6	18.6- 20.5	20.6- 24.6	>24.6	Total
NM	21.1	12.1	9.5	10.4	166,919	30.5	41.5	45.8	48.9	120,557
СМ	2.8	2.9	2.6	0.0	28,824	2.1	2.8	0.9	1.5	3,544
LN	0.6	0.1	0.1	0.0	3,140	0.0	0.0	0.0	0.0	17
AA	52.8	52.8	50.8	53.7	533,274	6.2	11.5	12.1	11.7	29,565
М	5.7	9.4	11.8	6.5	78,504	5.6	1.9	1.8	3.0	6,873
ND	17.0	22.6	25.2	29.4	202,971	55.6	42.2	39.3	34.8	89,861
Total Bales	516,344	398,543	98,556	201	1,013,644	338	2,384	56,209	191,486	250,417

Table 3 shows that, it is Merino breeders with lower micron wool, less than 18.6 microns, that are most likely to declare, with only 17.0% of their wool sold not declared. By breed, the declaration rate for Merinos is 80.0%, whilst the Crossbred declaration rate is 64.1%; this appears to be a reflection of market prices as indicated in the Premium and Discount report in Table 4.

Table 4. Premiums and Discounts for Mulesing Status (c/kg clean) for the past three seasons 2022/23 to 2024/25 (comparison with declared as Mulesed)

		Merino						Non-N	1erino			
		16	17	18	19	20	21	22	27	28	29	30
	Non Mulesed (NM)											
=	2022/23	25	36	15	17	19	6		0	-2	1	0
Season	2023/24	19	17	17	7	2			0	5	4	
Ñ	2024/25	25	20	9	8	5				5		
Ceased Mulesing (CM)												
=	2022/23		30	14	14	10	6					
Season	2023/24			9	5	2	1					
Ñ	2024/25		20	8	6	2				2		
			Mule	esed wit	h Analo	gesic &/	or Ana	esthetic	(AA)			
=	2022/23		19	5	9	6	4		0	0		
Season	2023/24			8	5	2	1		0	4	4	
Ň	2024/25	8	7	7	6	2				2	2	
					Not E	eclare	d (ND)					
=	2022/23	-39	-28	-24	-2	0	0		-4	-15	-13	
Season	2023/24	-15	-15	-7	-5	-5	-1		-7	0	-1	
Ŋ	2024/25	_	-27	-20	-1					-6	-4	

Source: AWEX

Criteria for calculation of Premiums and Discounts (c/kg clean) for Mulesing Status:

- Australian stored; Merino adult/weaners and crossbred fleece
- >30 N/ktex, >60% Schlum Dry, <2.2 VMB, Styles 4/5, Good/light colour (incl. H1), P Certificate
- Lengths according to diameter range: 70-95 mm (<18 μ m), 75-99 mm (19-21 μ m), 83-104 mm (22–24 μm), 90–110 mm (26–29 μm), 100–130 mm (30–34 μm)
- Records per group (micron/NWD status) >2, empty cells when not enough data to generate a P or D.
- · Comparison with prices for wool declared as Mulesed.

From a financial perspective, Table 4 shows that woolgrowers usually receive premiums for wool declared as NM, CM or AA. This is a greater issue for WA woolgrowers as their declaration rate is 55.1%, lower than all the other states that range from 79.0% to 87.8% wool declared.

Wool sold as ND usually receives a Discount compared to wool that is declared as M. These are the averages over the selling year and if you do mules, it

would likely be financially advantageous for you to complete the NWD and declare your wool as M, rather than not complete the NWD.

The message is clear. To ensure your wool attracts the highest price possible, you need to ensure that your wool for auction is accompanied by an NWD.

MORE INFORMATION



Don't let your Declaration be wasted!

f you don't **sign and date** your NWD, the Mulesing Status of your mobs/lines of wool will not be shown on the sale catalogue and test certificate. This can reduce the number of buyers bidding on your wool, as well as the price you receive.

To ensure the Mulesing Status of your wool is known by potential buyers prior to sale, sign and date the NWD.

It is good practice for owner/ managers to talk to the wool classer at the start of shearing to detail all mobs and to sign/date the declaration. Note, eSpecis can be electronically signed.



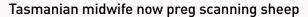
For further advice on achieving Premiums for your wool, contact your wool broker.

'World of wool' photo gallery

Have you got any interesting photos that you'd like to share with other readers of Beyond the Bale? If so, please email the image and a brief description to the editor of Beyond the Bale Richard Smith at richard.smith@wool.com.







With 20 years' experience as a midwife, Samara Leighton knows plenty about pregnancy scanning, but has since turned her skills to sheep scanning. Samara, who lives on a hobby farm in northern Tasmania, completed a week-long scanning course in NSW two years ago. She and her husband Dan then built a portable trailer fitted out with scanning equipment and launched a company, Robinson PregScan, that has been pregnancy scanning across Tasmania ever since. PHOTO: Amy Lyon Creative.



Queuing up at the unique Deeargee woolshed

Built in 1872, the octagonal Deeargee shearing shed at Gostwyck on the Northern Tablelands of NSW is a national landmark. Viewed from inside, its successive roofs of galvanised iron with side walls of glass cast a unique light on the Sutherland family's (@deeargee pastoral co) hundreds of superfine Merinos that are shorn there each year.





AWI film on show at Martin Place, Sydney

AWI's Wear Wool, Not Waste award-winning 60-second campaign film (see page 54) was played at the Sydney Film Festival 280 times from 4 to 15 June, reaching a pedestrian foot traffic audience in the CBD of 1.4 million. See the campaign film at woolmark.com/wear-wool



Remains of biodegraded wool jacket

Tara Viggo, whose company Paper Theory (@paper_theory) creates modern, easy to use sewing patterns, posted on Instagram this photo of all that remains of a wool jacket – a zip fastener – that she dug up in her back garden: "I just found the remainder of what I assume is the previous homeowner's jacket in my back garden. But with a helping hand from nature it turned itself into compost because it was made from wool. If it had been polyester or any other synthetic fabric, it would just be another piece of plastic polluting the garden," Tara said.







From red to green

Photographer and grazier Wendy Sheehan (@bulldust and mulga) lives with her family on a 1,000 square km property in western Queensland where they run a self-replacing flock of Merinos. They weren't as badly affected by the floods in March as some people who lost their homes, livestock and infrastructure. Recovery could take years for those badly affected people, but on the soil things began to look brighter within weeks. Here is a series of before, during, and after shots from a time lapse camera that shows how quickly the red landscape on Wendy's property turned green after rain.

















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