Beyond the bale

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Beyond thebale

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



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Industry Development



Market Analytics

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- AWI Extension WA
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Find your grower network at www.wool.com/networks or call the AWI Helpline on 1800 070 099.

AWI WORKING FOR WOOLGROWERS



John RobertsChief Executive Officer
Australian Wool Innovation

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

AWI addresses industry opportunities and threats

AWI is the R&D and marketing organisation for the Australian wool industry. It is AWI's role to undertake investment in these two areas on behalf of Australian woolgrowers to take advantage of the opportunities and address the challenges that the wool industry faces.

In the on-farm area, there are plenty of opportunities in which AWI is undertaking R&D on behalf of woolgrowers, such as maximising the genetic gain of sheep, improving sheep health and welfare, increasing the reproductive efficiency of ewes, and technology-based opportunities such as biological wool harvesting.

There are also industry challenges that AWI is addressing, such as ensuring woolgrowers' environmental sustainability in the face of climate variability, tackling invasive pests and diseases, and attracting and retaining wool harvesting staff through a multi-pronged approach including shearer and wool handler training. AWI also delivers practical training programs to increase growers' adoption of best practice on-farm management.

In the off-farm area, the Australian wool industry operates in a dynamic and competitive global market. In a commodity-based industry such as ours, it is especially vital that there is investment by AWI in the promotion of Australian wool in key markets to support its use by processors, manufacturers, brands and retailers, and of course purchases by consumers. The company also explores new and diverse product and processing opportunities for wool.

Market opportunities on which AWI and its marketing arm The Woolmark Company are working include the mega-trend towards sustainable fibres, the growing interest in the provenance of products, the increasing use of Merino wool as a high-performance fibre, and new product innovations such as wool footwear.

Conversely, there are also challenges, such the casualisation of apparel and adverse regulatory proposals such as in the European Union's Product Environmental Footprint (PEF) project.

Building value in sustainability for woolgrowers

As a natural, renewable and biodegradable fibre, wool is well placed to take advantage of the huge movement in the market towards sustainability. With the right approach and resources, the wool industry can become a global ambassador for the benefits of sustainable and circular raw materials. When compared with the extraction, waste and pollution of synthetic fibres, wool delivers clear advantages to brands and consumers looking to reduce the environmental impacts of fast fashion.

Our newly released Woolmark+ roadmap (see pages 10-11) has been developed to future proof wool in response to the increasing consumer and regulatory demands for lowimpact products. The roadmap consists of 13 initiatives that help woolgrowers and supply chain partners accelerate their understanding that wool already provides the solution in meeting many brands' sustainability goals. AWI is equipping woolgrowers with the necessary tools and research to make informed decisions that can be tailored to their own unique businesses. Woolmark+ highlights all the existing sustainable practices undertaken by Australian woolgrowers and provides opportunities that will deliver tangible commercial advantages throughout wool's value chain which will benefit woolgrowers.

Through Woolmark+, AWI is building on wool's premium reputation and enabling global brands to better understand, value and support woolgrowers' nature positive practices. By connecting sustainability goals along the supply chain and providing scalable opportunities, we are seeking to drive forward a prosperous, responsible and nature positive wool industry.

Have your say at WoolPoll 2024

In early September, every woolgrower who has paid \$100 or more in wool levy over the past three years will receive their WoolPoll voting papers and Voter Information Memorandum containing details about how AWI proposes to invest levy funds at each of several levy rate options.

This is one of the more critical moments in the wool industry's history and woolgrowers have some big decisions to make about their collective funding of wool industry R&D and marketing. I encourage all eligible woolgrowers to vote at WoolPoll. Voting opens on 20 September and ends on 1 November. The voting process is very quick and easy.

It's very important to note that a vote to continue the wool levy at the current 1.5% level does not mean there will be the same amount of dollar investment in R&D and marketing by AWI as there has been during the past five years. This is because AWI no longer has the financial reserves to call on that it once did; available reserves have now been spent. In terms of dollars invested by AWI, a 1.5% vote would therefore not be a vote for the status quo. I strongly urge all eligible woolgrowers to read the Voter Information Memorandum (also available now at wool.com/woolpoll) and ensure they make the most informed decision possible.

WoolPoll 2024 is a critical time to have your say. Remember, WoolPoll happens every three years, so the next vote following this year's WoolPoll will not be until 2027.

Despite the challenges faced by wool industry at the moment – including subdued global economic conditions and geopolitical instability that is adversely affecting wool prices and production costs, and unseasonally dry weather in some regions is impacting feed availability and stocking levels – I believe that the long-term outlook for the industry is bright and I look forward to AWI providing a valuable contribution to that future.



UPFRONT

WoolPoll voting begins on 20 September. It is woolgrowers' opportunity to have their say on the level of collective investment in research, development (R&D) and marketing to take advantage of the opportunities and address the threats faced by the Australian wool industry.

stablished by the Australian Government in 2001, Australian Wool Innovation (AWI) is the research, development (R&D) and marketing organisation for the Australian wool industry. AWI invests along the global supply chain for Australian wool – from woolgrowers through to retailers.

AWI's marketing arm is The Woolmark Company, so woolgrowers own one of the world's most respected and recognised fashion logos which is celebrating its 60th birthday this year.

AWI investments are funded primarily through a wool levy paid by Australian woolgrowers.



What is WoolPoll?

WoolPoll is a poll of eligible wool levy payers, conducted every three years, to determine the levy rate paid to AWI for industry R&D and marketing. Currently the levy rate is 1.5% (of the sale price woolgrowers receive for their shorn greasy wool).

At WoolPoll 2024, eligible woolgrowers are asked to consider four levy rate options: 0% 1.0% 1.5% 2.0%. They can vote for one or more levy rates in order of preference.

The levy rate that receives the highest number

of votes will be paid by all woolgrowers for the next three years (2025/26 – 2027/28). The levy rate takes effect from 1 July 2025.



Why vote?

WoolPoll is the opportunity for levy payers to directly influence how much funding AWI will receive to deliver R&D and marketing services for the Australian wool industry.



Who can vote?

If you have paid \$100 or more in wool levies over the previous three financial years, you will be eligible to vote in WoolPoll. For each \$100 of levy paid, you are entitled to one vote. You will have been notified of your voting entitlement in August.



When is WoolPoll?

September: Eligible wool levy payers will receive their voting papers and a Voter Information Memorandum containing details about how AWI proposes to invest the levy funds at each of the levy rate options and AWI's recommendation.

Monday 20 September: Voting opens. Voting will be by mail, fax or online – as per the instructions that will be sent with the voting papers.

Friday 1 November: Voting closes at 5pm (AEDT).

Friday 15 November: The WoolPoll result will be announced at AWI's Annual General Meeting. The levy rate takes effect from 1 July 2025.

More information: www.wool.com/woolpoll



The **Voter Information Memorandum** provides key insights about what each levy rate option will deliver to the industry. It has been authorised by the independent WoolPoll Panel and is being sent to woolgrowers in September; it is also available at www.wool.com/woolpoll.



Rich Keniry Woolgrower and Chair of the WoolPoll Panel.

Message from the independent WoolPoll Panel Chair to woolgrowers

Your fibre. Your future. Your call.

As Chairman of the independent WoolPoll Panel 2024, I encourage all woolgrowers to have their say on the future of Australia's wool industry.

As a woolgrower, you have an opportunity every three years to decide how much of your money is invested by AWI back into the industry through research, development and marketing activities to ensure that your wool remains the best in the business. Don't let someone else decide for you.

WoolPoll 2024 is your chance to have your say to help determine what the industry levy rate should be and what you will get back in return.

The Voter Information Memorandum, which you will receive in September, has been streamlined to provide you with the information you need in a clear and concise way, with the actual voting process being very quick.

Woolgrowers - big or small, it's your call!

The WoolPoll Panel

The role of the WoolPoll Panel is to confirm that the draft forms and the process for conducting the WoolPoll ballot have been examined and assessed as appropriate. Its role is not to tell woolgrowers what rate to support. The members of the 2024 WoolPoll Panel are:

- Rich Keniry (Cumnock, NSW), Panel Chair
- Alexander Lewis (Redesdale, Vic)
- Marcus Sounness (Amelup, WA)
- Dr Luke Rapley (Ross, Tas)
- Tom Moxham (Nyngan, NSW)
- Chris Kemp (Merriwa, NSW)
- Di Martin (Baratta, SA)
- David Young (Bookham, NSW)
- Jo Harris, Department of Agriculture, Fisheries and Forestry
- Neil Jackson, AWI Board member.

BIOLOGICAL WOOL HARVESTING UPDATE

The AWI project to develop a new opportunity for the biological harvesting of wool is progressing well, with work now underway on options to remove the wool above the weakened zone.

s previously reported, AWI is funding promising research into a Anew opportunity for biological harvesting of wool that generates a weakened zone at the base of the wool fibre but, importantly, enables the fleece to remain on the sheep without a net until the wool can be mechanically removed.

Researchers from the University of Adelaide are confident that the biological agent that creates the weakened zone will work, but they are continuing with more testing.

AWI is now investing in the second phase of the project which is the development of a way to harvest the weakened wool via a device that applies a force to separate the wool from the body of the sheep.

The development of such a harvesting system is a significant challenge, especially the development of a fully automated system to address the full range of different harvesting components including sheep delivery, positioning and restraint; removal of wool; sheep release; in-shed wool processing; and wool pressing.

Without a practical, cost-effective, and efficient way to harvest wool, biological wool harvesting is unlikely to be a strong alternative to traditional shearing, even if the biological part of the project is a success.

R&D into wool harvesting systems

In October last year, AWI issued a worldwide Request for Proposals (RFP) for the development of a variety of wool removal systems;14 proposals for funding were submitted to AWI. AWI is progressing with four of the proposals (see below), which each take a different approach to removing the wool.

Each of the four projects include clear Go/No-Go points linked to whether the researchers achieve significant milestones. This includes an early Go/No-Go point involving prototypes being tested later this year on treated sheep provided by the University of Adelaide.

The management model being applied by AWI will reduce investment risks and enable collaboration between participants.

University of Technology Sydney (UTS)

Building on previous AWI-funded research undertaken by UTS on wool handling automation, this project uses belt friction to remove and separate the wool from the sheep. The belts interact with a suction mechanism to transport wool to a desired location in the shed. The project will examine animal handling and robotic control of the wool removal mechanism. It will also build on previous work done by UTS to develop a semi-autonomous wool inspection and classification, and wool handling and baling system.

University of Wollongong

This project will develop four systems for biological wool harvesting that have increasing levels of complexity, but also increasing potential for cost savings: an initial wool removal mechanism that primarily utilises suction; a manually operated handpiece that utilises the vacuum mechanism; a semi-autonomous system that automatically removes the majority of the fleece but still requires a human shearer to remove wool from the belly/ legs/head; and a fully autonomous system (from sheep to classer).

Agricultural Technology Solutions

This Australian-based company is undertaking R&D into a fully integrated biological wool harvesting system. The design will incorporate animal positioning/handling; fibre severance and wool removal utilising tangential pneumatic force via multiple air blades, or incorporated with hydro or mechanical assistance; fibre quality assessment; and collection and transfer of the wool to the bale.

Brooke and Mackenzie Pty Ltd

Building on previous AWI-funded research, Brooke and Mackenzie is re-examining a handpiece designed for defleecing 15 years ago, to assess its suitability and development for biological wool harvesting in combination with the biological agent developed by the University of Adelaide. While a standalone handpiece without a wool transport or handling system might not be the optimal choice for a wool harvesting system, having a functional handpiece could prove useful in the short term.

Biological wool harvesting is an example of the multi-pronged approach that AWI is taking to make wool harvesting easier and more costeffective for woolgrowers and the industry.

BULK STORAGE SOLUTIONS & STOCK-PROOF TROUGHS



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.

AWI continues to regularly fund and support hands-on practical in-shed training for shearers and wool handlers – pictured below (and overleaf) is a small selection of AWI-funded courses recently run across the country.

In addition to funding novice training, AWI also has a focus on retaining workers who have already embarked on a career in the industry. Three years ago, AWI introduced a project to equip learner shearers with an 'AWI Learner Shearer Toolbox' containing a handpiece and other shearing gear, subject to the shearer passing certain criteria.

"The AWI toolbox provides an extra incentive for budding shearers to build up their skills and stay in the industry," said AWI National Manager, Wool Harvesting Training & Careers Development, Craig French.

"Since the project was launched, AWI has issued 540 toolkits to learner shearers who have taken up shearing full time. The initiative has clearly played a large part in retaining learner shearers – our analysis shows that 100% of learner shearers that were issued with a learner toolkit in 2023/24 have stayed in the industry.

"Furthermore, the feedback from shearing contractors is that they are pleased with AWI's toolkit initiative and would like the company to continue investing in it in the future."

AWI-funded trainers carry out wool harvesting training in New South Wales, Western Australia, Queensland 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.

More information:

www.wool.com/harvestingtraining

To arrange training in your state, email craig.french@wool.com or swt@wool.com.

Keep an eye on the Facebook channels of @australianwoolinnovation (NSW, WA, Qld) and @shearerwoolhandlertraining (Vic, SA, Tas) for the latest updates.



Ballan, VIC



Teetulpa, SA



Holowiliena, SA



Oakden Hills, SA



Eulong, VIC



Muresk, WA

MORE SHEARER TRAINERS TRAINED

The future of shearer training in Australia looks bright following a two-day workshop held in June for potential new AWI in-shed shearer trainers.

At the workshop, some of the best young shearers in the country were taught by experienced master trainers from Australia and New Zealand. A mix of innovative and new techniques along with the tried and proven were passed on by the master trainers to the next generation of trainers coming through.

The level of experience at the workshop was supreme with participants collectively having achieved three World Championship wins, 60 Trans-Tasman tests, almost 20 National titles, 40 State titles, nine shearing records and about 600 Open competition wins.

As well as Australian master trainers from AWI and SCAA SWTI passing on their skills, three trainers from New Zealand crossed the ditch as part of the exchange program with New Zealand's Elite Wool Industry Training. This exchange program ensures consistency of shearer training across the Tasman.

Thanks to AJ & PA McBride for the use of their new shed at Telopea Downs (see page 9).







Cooma, VIC

Kulin, WA

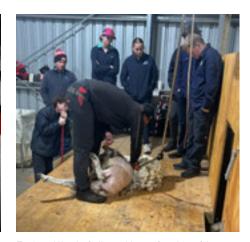




Northampton, WA



Inglewood, VIC



Tenison Woods College, Mount Gambier, SA



Crookwell, NSW

A shearing workshop held in May attended by an incredibly driven group of women demonstrated how a focus on shearing technique rather than shear power is enabling more and more women to join the industry and excel in it.

The air in a shearing shed of a morning is like no other. It's filled with anticipation of the day ahead, laughter, the sound of sheep moving on the grating, distant calls from the sheep yards, tales of the night before, the sounds of the metal combs hitting grinding papers, a few groans of sore bodies, and the thrill of the day ahead.

ON-FARM

This morning is no different. Only there is an electric excitement added to the mix because today this shed is the venue for an all-women's shearing workshop, reflecting the shifting demographics of the shearing industry.

The two-day workshop was organised by AWI and SCAA Shearer Woolhandler Training Inc (SCAA SWTI) and held towards the end of May at AJ & PA McBride's new 12-stand shed at Eureka on the company's 'Telopea Downs' property near the Victoria/ South Australia border.

The 16 up-and-coming female shearers at the workshop were given the opportunity to be taught by an impressive group of trainers including two-time world champion Shannon Warnest, advanced trainer Paul Oster, gear expert Klynt Corell and SWTI CEO Glenn Haynes, as well as female world shearing record holder Catherine Mullooly from New Zealand.

"Each of the women here were handpicked. We filled the shearing school in 24 hours and honestly some amazing shearers missed out," said Glenn Haynes.

Like most shearing schools, the students learnt tips and tricks from shearing technique to grinding skills, even discussing life skills and how to progress forward with their professional goals. All of the shearers were at different stages in the careers, but most had big dreams and were grateful for the opportunity to be there.



Maxi Armistead of Colac in Victoria.

"We have spent two days learning all about different shearing techniques, comb selection for sheep in different areas, and meeting female shearers from all over the country. It has been an incredible experience, and we were very lucky to have such great trainers and brand new facilities at Telopea Downs," said shearer Maxi Armistead of Colac in Victoria.

"Hearing Catherine's story from starting out shearing all the way to her world record was very inspirational."



Catherine Mullooly demonstrating with trainer Shannon Warnest.



Students and trainers at the two-day all-women shearing workshop held in May.

Catherine Mullooly said she was nervous about heading to Australia and teaching, but she soon found her feet.

"I'm not a big framed person and neither are any of the students here. It's really about footwork and balance, allowing you to be able to shear without having to fight against the sheep all the time," Catherine said.

"They have been an amazing group of young women and it's been wonderful to see all the improvements they have made in two days. They have all listened so intently to all the trainers; it's been great to watch."

With so many women working in shearing sheds across the country, long gone are the days when 'ducks on the pond' was called out when a female was seen approaching the shearing shed. In recent years, more women having joined the wool harvesting industry as shearers as well as wool handlers.

Maxi Armistead has been in shearing sheds for the past three years, 18 months ago leaving the wool table for the handpiece.

"It's good money and you have the ability to dictate your day a little with the pace you set for yourself. I shore 302 at the start of the year, it was a great achievement. Moving forward, my goals are to do more travel with my shearing; I would like to work in teams all over the country and the world and really push my comfort zone," she said.



Grace Schoff of Chinchilla in Queensland.

Another student, Grace Schoff, who is a Queensland representative on AWI's Wool Ambassadors Program, made the trek from Chinchilla to attend the workshop.

"Having the opportunity to shear with so many up and coming female shearers has been amazing. Telopea Downs has been one of the best schools I have ever attended," she said.

"The trainers were exceptional at delivering training in a way that everyone understood and were always happy to answer questions. I have a few idols when it comes to shearing, my dad being my biggest idol. Shannon Warnest is another and to have the opportunity to shear here with him training has been amazing. Him and Catherine are just genuine people who I look up too."

There is no doubt that this shearing school was a great success and a great demonstration of the progress in our industry.

AJ & PA McBride's new shearing shed at Telopea Downs

AJ & PA McBride's brand new 12-stand shearing shed at 'Telopea Downs', which hosted the all-female workshop, is an investment by the company that reflects its commitment to Merino wool.

The McBride family has been producing wool in Australia since 1859. AJ & PA McBride Ltd was founded in 1920 and now owns and operates five pastoral and five grazing properties in South Australia, as well Telopea Downs on the border of South Australia and Victoria.

AJ & PA McBride is a proud producer of Merino wool. Owning 270,000 sheep, the company is one of the largest wool producers in Australia. In 2023/24, it shore 350,000 sheep across its properties, producing 1.6 million kilograms of wool, 8,600 bales.

"The company has confirmed its commitment to being a top Merino wool enterprise. From this commitment, we purchased the Telopea Downs aggregation of 11 properties in 2018," said CEO of AJ & PA McBride, Nathan Wessling.

"Over six years of ownership, we have reduced the commercial cropping area and increased sheep numbers on average by five percent each year, and this has ramped up over the past two years under current manager Drew Maxwell."

As the company moved away from cropping towards a wool flock at Telopea Downs, the increased numbers of sheep put a strain on the existing infrastructure. Shearing almost 90,000 sheep in 2023/24, the company identified the need for a new shearing shed, which was completed earlier this year.

"The last two years' shearings at Telopea Downs were longer than three months, utilising five woolsheds, which was unsustainable," Nathan said. "Whilst we will still be utilising some of the other woolsheds on the property, the new Telopea Downs shed will be the main shed and cut shearing from 15 weeks last year to eight weeks this year."

The shed was built by Greg Kendrick from Tintinara and is the third shed he has built on AJ & PA McBride properties following Konetta in 2011 and Braemar in 2020. It is 48 x 40 metres and contains a 12 stand, raised curved board. It has a capacity for 2,500 sheep penned undercover and storage for 300 bales. This year the company expects to shear 62,000 sheep at the shed, producing 1,500 bales of wool.

Nathan says as well as the need for the shed to be productive and efficient, another important consideration for the build was the provision of modern facilities for wool

harvesting workers.

"With a shortage of shearers in the industry, we must ensure we have the best facilities to attract shearers and wool handlers to the industry and to our properties. We want McBride sheds to be on the shearers' priority list" he said

"The shed has a large lunchroom with a sink, oven and fridge – in addition to the kitchen/dining room at the shearers' quarters.

There is also a washup area with both hot and cold water, an enclosed grinding room, and separate catwalks for staff around the exterior of the shed for safety."

Looking to the future with wool

Now into its second century of operation, AJ & PA McBride has a variety of agricultural, horticultural and viticultural interests, but the company more than ever remains committed to proudly being a wool producer.

"Wool has always been in the DNA for AJ & PA McBride since father and son started operating properties together more than a century ago. Whilst current prices are at historical lows, the lesson that the company learned in the 1990s was that the best producers concentrate on what they are good at, focusing on the profit drivers of operations and ignoring distractions. And for our enterprises, wool cut per hectare is the main profitability driver," Nathan said.

"AJ & PA McBride's core mission is to be a strong, united and sustainable family company. Our commitment is that this company survives and thrives for the future generations of the McBride family – not only from a financial point of view, but by ensuring our viability in an ever changing climatic and consumer driven world. We believe that we are well placed to achieve this by focusing on our core business of Merino wool."

More information: www.mcbride.com.au



WOOLMARK+ ROADMAP TO NATURE POSITIVE FUTURE

AWI and its marketing arm, The Woolmark Company, have unveiled a comprehensive new roadmap, known as Woolmark+, that is designed to help woolgrowers and supply chain partners accelerate the wool industry's transition towards a 'nature positive' future.

Fast Facts

- The Woolmark+ roadmap is designed to build value for woolgrowers now and into the future. It has been developed to future proof wool in response to the increasing consumer and regulatory demands for low-impact products within the fashion and textile industries and along their supply chains.
- Woolmark+ is designed to build on wool's premium reputation and ensure woolgrowers' commitments to nature are recognised and supported.
- The roadmap consists of 13 initiatives that extend beyond environmental stewardship to delivering tangible commercial advantages throughout wool's value chain which will benefit woolgrowers.



Download the 25-page Woolmark+ roadmap at www.wool.com/woolmarkplus

Shifting consumer preferences towards lowimpact products, coupled with new regulatory measures, are creating both opportunities and challenges for woolgrowers and brands. The Woolmark+ roadmap aims to support woolgrowers and their customers tap into the opportunities that are available to the wool industry (see below).

Woolmark+ brings together a set of initiatives (see opposite page) designed to support woolgrowers as they manage their natural assets for the benefit of their business, customers and the environment. The roadmap is designed to be solutions-focused, pragmatic and innovative.

"As consumer demand continues to grow for sustainable products, brands are being challenged to provide fabrics and garments that have a lower impact. Through Woolmark+, we are helping woolgrowers and the supply chain seize this opportunity to safeguard and support global market demand for high-quality wool," said AWI CEO, John Roberts.

"As a renewable, biodegradable and recyclable fibre created in nature, wool inherently embodies circularity. And with woolgrowers setting global standards in low-impact production, this places the wool industry in a unique position to lead the global shift towards a more nature positive future.

"Woolmark+ is designed to position wool as not simply a fibre 'from' nature, but as a fibre 'for' nature, driving industry-wide opportunities and positive environmental outcomes for future generations."

John Roberts, AWI CEO

"Furthermore, at a time when 'carbon tunnel vision' is causing unintended consequences for nature and livelihoods, Woolmark+ aims to move the conversation beyond the focus on carbon and net zero targets towards nature positive, to ensure woolgrowers' commitments to nature are recognised and supported."

Benefits of Woolmark+ for woolgrowers

Engaging in the Woolmark+ programs will help Australian woolgrowers to optimise nature positive practices on their farms and maximise the benefits, including:

- 1. Market access Being able to showcase nature positive practices will enhance the reputation of Australian wool and increase access to market opportunities, both for individual woolgrowers and for the industry as a whole.
- Increased productivity Nature
 positive farming practices can enhance
 agricultural productivity and ensure
 long-term sustainability.
- New income streams As demand continues to grow for more sustainable products and climate-positive solutions, this will drive diversified revenue streams and a more stable business outlook for woolgrowers.
- Future generations By supporting sustainable livelihoods, we can safeguard wool-growing now and into the future.

 $\begin{tabular}{ll} \textbf{More information:} & www.wool.com/woolmarkplus \\ woolmarkplus@wool.com \\ \end{tabular}$

Opportunities for wool

Woolmark+ identifies the following five opportunities that the wool industry can capitalise on to ensure it thrives into the future:

- 1. Regenerating nature Woolgrowers are responsible for safeguarding their land and sheep, giving the fibre a connection to nature that fossil fuel materials like polyester will never have. When managed properly, sheep can regenerate the land on which they graze, and wool-growing properties can increase their capacity to support rich ecosystems and carbon storage.
- **2. Emissions mitigation** Wool-growing properties have the potential to offer

nature-based solutions that deliver cost effective greenhouse gas mitigation, by reducing emissions, such as through increasing flock productivity, or by carbon sequestration and storage, such as by improved management of soil organic matter and tree planting.

- 3. Transparency and traceability The wool industry has introduced new initiatives in response to a shift in demand for more transparent, traceable products. These initiatives include the new Australian Wool Traceability Hub, on-farm and supply chain certifications, and industry reporting through the Sheep Sustainability Framework.
- Advancing circularity In contrast to synthetic fibres, wool fits into a circular

model of production that minimises waste and pollution. As well as being a renewable and biodegradable fibre, wool garments are on average kept in use for longer periods of time than garments made from other fibre types, and wool is the most recycled fibre.

5. Collaborative investment – Woolgrowers can't be green if they're in the red. Significant pools of capital are being directed toward nature stewardship activities globally from grants through to venture capital. Investing in nature-based solutions in the wool industry offers a combination of financial, environmental, and social benefits, making it a compelling choice for forward thinking investors.

What are the Woolmark+ initiatives?

The Woolmark+ roadmap has three overarching objectives, with a series of 13 initiatives that woolgrowers, the wool supply chain and brands can explore for enhancing biodiversity, reducing emissions and realising financial and operational benefits.

The first three initiatives in the left-hand column below are currently undergoing investigation and AWI is seeking feedback from all stakeholders into their development. The other ten initiatives are already proceeding, highlighting the journey to nature positive has been long underway for the wool industry.





Accelerate nature positive production



Insetting program

This program aims to create the foundation of an Australia-wide wool insetting market, connecting global fashion brands looking to meet scope 3 emissions targets with Australian woolgrowers to jointly deliver on farm emissions reductions and removals projects.



Nature positive impact program

This program will connect investors with independent programs at leading institutions, presenting a portfolio of investment opportunities spanning across research, development, education and conservation, to accelerate a nature positive future.



Nature positive farming specification

This program will develop science-based, practical metrics for assessing and reporting on environmental outcomes on wool farms for woolgrowers, on-farm certification schemes and brands.



Methane Emissions Reduction in Livestock

A collection of nine research and development projects working towards identifying and assessing strategies to reduce emissions from grazing sheep using feed additives.



Carbon storage on wool farms

Research and training to support Australian woolgrowers understand and take up profitable and sustainable pathways to reduce carbon emissions and increase carbon storage in soil and vegetation.



Enhanced sheep productivity and profitability

The 10-year Merino Lifetime Productivity research project has captured sheep data from different environments, genetics and Merino types to improve productivity and profitability, through increased feed efficiency, resilience, survival and lower methane.



Deliver the circular fibre of choice



Woolmark quality assurance program

Continuing to uphold wool quality standards and promote long-lived



Woolmark recycled wool content specification

The Woolmark Certification Program has been extended to include a specification to quality test and certify products with recycled wool content.



Removing chemicals of concern in the supply chain

Working with the Woolmark licensee network to understand where chemicals of concern are still in use in wool manufacturing and phase these out.



Support thriving flocks and communities



Traceable wool production

Provide directories on woolmark. com for Australian woolgrowers and Woolmark licensees to report on their sustainability commitments, helping brands and retailers access more transparent information on sustainable wool production.



New environmentally friendly pest and disease management solutions

Research into new bio-rational pesticides to manage pests. reduce residue and environmental impact, and deliver extended periods of protection.



Supporting woolgrowers to manage flystrike

An extension program to support woolgrowers to manage flystrike and reduce reliance on mulesing, along with a framework to support woolgrowers seeking to transition away from mulesing and proactively engage brands and industry stakeholders to align support and approach.



Enhancing ewe and lamb wellbeing

A combination of research and education projects are helping Australian woolgrowers implement best practice management for lambing.



INDUSTRY SUSTAINABILITY PERFORMANCE REPORT

PHOTO: Southern Lightscapes-Australia

The Australian sheep industry's Sheep Sustainability Framework (SSF) last month issued its latest Annual Report which provides data on the industry's progress against key sustainability priorities. The SSF was initiated in 2021 by Australia's sheep industry leaders to demonstrate the industry's sustainable practices, identify areas for improvement, and better communicate with customers and consumers.

What is the Sheep Sustainability Framework?

The Sheep Sustainability Framework (SSF) is an industry owned initiative to monitor, measure and report the Australian sheep industry's performance against sustainability priorities.

WoolProducers Australia and Sheep Producers Australia led the development of the SSF with AWI and Meat & Livestock Australia providing funding, together with strategic and secretariat support.

The Framework was developed through extensive consultation and launched in April 2021.

The SSF identified 21 priorities relevant to sustainable sheep production in Australia, classed into four themes:

- 1. Caring for our sheep
- 2. Enhancing the environment and climate
- 3. Looking after our people, our customers and the community
- 4. Ensuring a financially resilient industry.

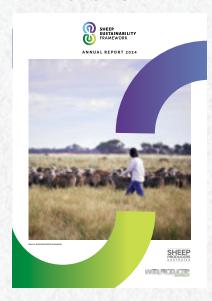
The performance of the sheep industry in these areas, tracked over time, provides evidence of the industry's commitment to continuous improvement. It demonstrates that Australia has a clear path towards sustainably produced sheep meat and wool.

"The significance of the framework is around galvanising industry and telling a great story. We have a consumer base eager for information about the provenance of products, and this gives us an opportunity to provide customers globally with authoritative data from the source."

John Roberts, AWI CEO

While the SSF takes an industry-wide perspective and therefore does not require any direct input from producers, individual businesses may use the SSF to understand the industry's sustainability credentials and material issues, and consider these in their forward planning.

What is the industry's progress?



The latest 68-page SSF Annual Report, released in August 2024, is available on the SSF website at www. sheepsustainabilityframework.com.au.

The SSF last month launched its latest **Annual Report** which reports data on industry progress against key sustainability priorities.

The task of building a complete framework where every indicator has both a metric and data is progressing well, with 96% of SSF metrics now having supporting data. The Annual Report provides second or third wave data points for 60% of the metrics, and baseline (starting) values for 36%.

In addition to the new Annual Report, also available on the SSF website is a new digital data dashboard that includes current and historical data, thereby showing the progress that the industry is making across multiple years.

The digital data dashboard is in an interactive format that will be updated with new information as it becomes available.

Reported for the first time in the SSF, sheep producers were asked to rate their satisfaction with their 'life as a whole' as part of the Global Life Satisfaction Index, which encapsulates their standard of living, health, what they are achieving in life, personal relationships, safety, feeling part of their community and future security. Their score of 76.1% was higher than the average Australian (69.4%).

Sheep producers have shown a growing interest in measuring their farm greenhouse gas (GHG) emissions. The latest National Producer Survey found the percentage of producers using carbon accounting or another process for their enterprise had more than tripled to 9.9%, up from 3% in the 2022 National Producer Survey.

Other highlights include:

- Baseline data showed 72.6% of producers are undertaking deliberate activities to measure, maintain or enhance biodiversity.
- The percentage of wool declared as non-mulesed/ceased mulesed has increased to 18.6% for Merino and 47.1% for non-Merino.
- The appropriate use of pain management for mulesing, castration and tail docking continues to improve year-on-year.
- The gross value of the Australian sheepmeat and wool industry has jumped 8.9% in a year to \$7.7 billion.

Access to labour remains an issue for the industry. In 2023, the National Producer Survey asked producers to rate the extent to which availability of general labour was an issue for their operation. More than four in every 10 producers (42%) reported major issues with finding general labour, representing a 7% increase since 2022. The story is slightly better for shearing labour, with 35.3% of producers reporting issues with the availability of shearers, down from 38.8% in 2022.

More information:

www.sheepsustainabilityframework.com.au

NEW REPORT SHOWCASES THE AUSTRALIAN WOOL INDUSTRY'S INVESTMENT IN SUSTAINABILITY

AWI has issued a new report that shows sustainability has long been, and continues to be, at the forefront of the Australian wool industry's practices.

The new Sustainability Progress Report provides an overview of some of the sustainability programs, initiatives and achievements of the Australian wool industry during the past 20 years.

These range from the Land, Water & Wool program (2002-07), which was the industry's most significant R&D investment in natural resource management, through to present programs such as the current trialling of methane-mitigating feed supplements for grazing sheep.

Subtitled 'Australian wool - best in the world and only getting better', the report demonstrates how the industry is continuously building on insights from on-farm practices and research studies to achieve positive sustainability outcomes as well as maximise productivity.

AWI CEO John Roberts says Australian woolgrowers for generations have shown how the Australian rural landscape can be managed effectively while protecting the natural environment, supporting rural communities, and meeting the needs of increasingly environmentally-aware customers.

"This report demonstrates that good natural resource management is not new to Australian woolgrowers; it is something they have been doing for decades. Having a deep understanding of and connection with their farm's natural resources and a strong commitment to animal wellbeing is fundamental to productive wool-growing - it's directly linked to their livelihoods," John said.

"Australian woolgrowers undertake initiatives to protect, preserve and improve the natural resources on their properties for future generations. Furthermore, Australian woolgrowers comply with a range of industry audits and Australian and state environmental regulations covering topics such as animal wellbeing, chemical use, biosecurity, land clearing, biodiversity, pest animal management and water allocations."

Thanks to this ongoing commitment to the environment, assisted by future-proofing initiatives such as Woolmark+ (see pages

10-11), the wool industry is well-placed to compete and thrive in a low-impact market.

"With governments, brands, and consumers all advocating for a nature positive future, there is now an opportunity for woolgrowers, and others in the value chain, to evidence and further develop their practices. This will drive forward a prosperous, responsible and nature positive Australian wool industry," John said.

More information:

www.wool.com/sustainability



Download the 40-page report from the AWI website at www.wool.com/sustainability

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Through consultation with woolgrowers and the supply chain, AWI is building industry-wide consensus on the most commercially appropriate metrics for woolgrowers to measure, manage and report their on-farm natural capital and environmental performance.

With 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.

What is clear though is that demand for this fibre is outstripping supply. Only about one in every ten bales of Australian wool is currently certified as sustainably produced, despite positive environmental practices being widespread on Australian woolgrowing properties.

Buyers and brands want significantly more woolgrowers to engage with on-farm environmental certification schemes. For this to happen at scale, (1) more woolgrowers must be able to measure and demonstrate their positive environmental performance, (2) labelling and terminology must resonate with the whole supply chain, from woolgrowers through to consumers, and (3) assessment must be cost-effectively provided to woolgrowers, minimising barriers to adoption.

AWI has responded to these challenges through a project called *Natural capital and environmental performance measures for Australian woolgrowers*. The AWI-funded project was conducted by Farming for the Future, a not-for-profit research initiative exploring the relationship between natural capital and farm business performance (www.farmingforthefuture.org.au), in collaboration with the Research Centre for Future Landscapes at La Trobe University.

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/buyers and brands. They acknowledge the industry-wide benefits of the project, which include:

"Using metrics has an educational benefit because it can provide farmers with new knowledge about their farms. We can see improvements, which is encouraging and satisfying. Having data on metrics means you can use this information to guide management decisions."

Woolgrower

- Australian woolgrowers and supply chains collaborating to measure, manage and report on their environmental performance.
- Standardised, science-based, commercially appropriate metrics of on-farm performance.
- Industry consensus on the definition of sustainable farming, thereby providing clarity for supply chains and markets.

Measuring environmental performance

Although sustainable natural resource management practices are routine, wool growers need to be able to back up claims of positive environmental performance with credible evidence. AWI is working to make this easier, by enabling robust objective evidence to be cost-effectively provided.

Currently, inconsistency in farm-scale measures drives up the cost and complexity of measurement, and therefore limits woolgrowers' ability to supply sustainably-certified wool. Also challenging is aligning the measurement and reporting with international accounting frameworks for carbon and nature, as well as market requirements, for example EU greenwashing regulations, and the Science Based Targets initiative (SBTi, www.sciencebasedtargets.org).

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.

A key result of the project was defining a core set of fundamental, scientifically-based, environmental measures, which include soil and pasture condition, biodiversity, waterway health, as well as carbon – see the box below. These measures have been shortlisted from those developed and tested on-farm during past Farming for the Future and La Trobe University projects. All metrics with an asterisk (*) would be remotely assessed using satellite imagery, reducing the cost of assessment.

These measures are outcome-focused, able to report trends over time; rigorous; practical and cost-effective to measure; and useful for on-farm decision-making.

Whilst there was good compatibility between these core measures and those already adopted by certification schemes, a key difference was most certification scheme measures were practice-based, whereas the proposed metrics are outcome-based. For example, a grower declaration of sufficient shade and shelter for livestock vs objectively measuring this via remote sensing. Outcome-based measures provide greater rigour in supporting the needs of brands and providing woolgrowers with useful farm management data.

Establishing baseline measures for individual farms is a critical first step to identifying and reporting trends over time.

These measures were agreed through consultation with industry stakeholders, including woolgrowers.

The core metrics agreed through consultation

- Water use efficiency (water used in production)
- Net greenhouse gas balance (emissions minus woody sequestration)
- Carbon sequestration* (carbon stored on farm)
- Soil condition* (ground cover used as a proxy for soil condition)
- Forage condition (condition and quality of pastures)

- Aquatic condition* (extent to which riparian and wetland areas are vegetated)
- Tree cover* (extent of canopy cover)
- Ecological condition* (proxy for habitat)
- Tree aggregation* (distribution of woody vegetation: native and exotic)
- Shade* (shade provided by trees to production areas)
- Shelter* (shelter from wind, provided by trees, to production areas)
- Biodiversity management index (degree to which a farm is managed in a biodiversity positive way)

Definition of 'Nature Positive Farming'

Definitions are important to ensure the whole supply chain is talking about the same environmental outcomes on-farm. It's especially important to be communicating to markets (brands and consumers) in language they understand.

"Brands ask for 'regenerative' but they don't know what that means...a definition is very important and would allow us to tell them exactly what we are providing them."

Leading wool broker

The project explored definitions for 'regenerative' and 'nature positive', and industry stakeholders provided valuable insights and perspectives.

There is not yet a simple solution to labelling positive on-farm environmental management that resonates all along the supply chain.

Whilst 'regenerative' resonates strongly with the demand-end of the supply chain (and has high market penetration), it can be a vexed term for the supply side (woolgrowers).

'Nature positive' has an agreed global-scale definition, in the Kunming-Montreal Global Biodiversity Framework.

The project has therefore merged the definitions for regenerative and nature positive to create the 'Woolmark Nature Positive Farming' specification:

HEADLINE DEFINITION

Nature Positive Farming leaves the land in a better condition for the next generation, enhancing regeneration, biodiversity and supporting livelihoods and animals.

FOUNDATION DEFINITION

Nature Positive Farming leverages natural capital and ecosystem services to produce wool in a way that measurably improves the extent and/or condition of soil, water, carbon, native species and habitats and reduces threats to biodiversity, at the farm-scale relative to a baseline. Nature Positive Farming can support long term resilience, productivity, animal wellbeing, sustainable livelihoods, whilst minimising waste and chemical and/or non-renewable energy inputs.

"This is a great opportunity to create a reward system for wool and the environment, and inspire change. There are global and grower benefits. Industry needs a responsible emissions reduction pathway, and using measures, growers can demonstrate awareness in their decision making and journey."

Woolgrower

"Our job is to deliver value to growers and help them to tell (and sell) their story and the story of their wool. Having consistency in outcomes-based metrics will help us do this."

Certification body

TURN OVER TO READ A CASE STUDY OF A WOOLGROWER PARTICIPANT INVOLVED IN THE CONSULTATION



MEASURING OUTCOMES OF ECO MANAGEMENT

Jon and Claire Welsh, who farm on the Northern Tablelands of NSW, were two of the woolgrowers who provided input for the AWI-funded natural capital and environmental performance measures project (see previous page). Here they outline the benefits they see with measuring and reporting their own farm's natural capital.

"We want to improve our productivity and leave the farm in good shape, and give it the best possible prospects for success in business for the next generation."

> Woolgrowers Jon and Claire Welsh, **Oban NSW**

on and Claire Welsh own and run Square One Pastoral Co at Oban in the New England region of northern NSW. Their business is a mix of sheep and breeding cows; about 5,000 sheep DSE and 10.000 cattle DSE. The cows produce about 300 calves which the Welshes grow out to feeder steer weight (450 kg). The sheep are all Merinos growing ultrafine 15-16 micron wool.

The Welshes' property comprises three separate land parcels, totalling 1250 hectares. Located on the Northern Tablelands at about 1300 metres above sea level, it receives a summer dominant rainfall averaging 900-1000 mm. Their pastures are based on a mix of fescue-based perennial, with some native pasture country and 50 hectares of old growth forest.

The Merinos are shorn every six to eight months and produce about 70 bales of wool per shearing.

"Our preference for selling our wool is to use forward contracts - this gives us confidence about our cash flows and simplifies our product marketing. We know that when forward contracts disappear there is less confidence from the supply chain. Typically, this means prices are softer and we then sell through the auction system in a more uncertain environment," Jon said.

"Our wool is non-mulesed and sustainability certified via both the AWEX NM Wool Declaration and by Textile Exchange via the Responsible Wool Standard.

"We do find that there is effort involved in maintaining these certifications. It is our hope that Woolmark Nature Positive Farming specification will lead the way in building consistency and relevance around outcome-based measures."

Jon and Claire Welsh were involved in AWI's Natural capital and environmental performance measures for Australian woolgrowers project, which is building industry-wide consensus on the most commercially appropriate metrics for woolgrowers to measure, manage and report



The Welshes' ultrafine Merino flock on the Northern Tablelands of NSW.

their on-farm natural capital and environmental performance (see previous page).

"We volunteered to be involved in the natural capital project woolgrower focus group because we wanted to help support a grower-led (bottom up) certification," Jon said.

"We wanted to share the woolgrower reality about what's practical. Anyone who has been through an audit would wonder who develops the guestions and why some of the requested information is needed. The focus group gave us an opportunity to be heard and have an opportunity to influence the outcome.

"AWI has taken an industry view with this project and are focused on positive outcomes for the industry and growers. As an industry, we need to be on the front foot to demonstrate to customers that wool is an environmentally and ethically sound product. Participating in certification schemes helps to demonstrate this, although we think the design of schemes could be improved to give more confidence to the customer that we have a sustainable production system."

Measuring the outcomes of management

Jon grew up on the farm and came home after finishing studies in economics and trade at the University of New England. Claire trained as an agronomist and crop physiologist / ag systems

scientist at the University of Sydney.

"We understand the agronomic benefits of soil carbon, such as increasing water holding capacity and nutrient cycling, and believe the production benefits exceed the dollar benefits of carbon trading. A key business goal for us is to increase soil carbon and improve biodiversity over time," Jon said.

For Jon and Claire, nature positive farming is how the family has been managing the land for generations.

"We don't see ourselves doing much differently from other woolgrowers in our district. The only difference is now we're measuring the outcomes of our management, and are more aware of the impact of our management," Jon said.

"Our decisions are underpinned by a science focus, giving added rigour. We're listening and adopting new practices to build soil carbon. For example, more watering points and fencing, pasture improvement using new fescues with novel endophytes, and the use of herbs such as chicory and plantain to potentially reduce ruminant methane emissions.

"We're gearing our business up for a changing climate with more temperature and rainfall extremes.

"We hope one day measuring and managing biodiversity and carbon can diversify our income streams from the farm business. We hope nature positive farming gives us more market access and we've taken the view that one day it will, which is why we are measuring a whole bunch of new farm metrics.

"It gives us time series data from where we started, where we're heading and how we're tracking. It also gives us an understanding of the commercial reality of implementing management to improve carbon or biodiversity.

"One of our main achievements has been a focus on maintaining ground cover and proactive drought management strategies. We are conscious to de-stock quickly and rest our country to prevent it becoming bare, although this can be a challenge when livestock prices crash. Our livelihood depends on ground cover and healthy soils. In agriculture there are always curve balls – proactive management helps us to deal better with the uncertainties."

Biodiversity Conservation Trust

The Welshes have a Biodiversity Conservation Trust (BCT) project with the NSW government, which they started working on in 2019 and registered in 2021.

"We haven't yet sold any biodiversity credits, but it's sitting there ready, with detailed baseline measures done. The decision to go down this path was made like we would any business decision, weighing up the costs and benefits.

"The business case for retaining and improving the old growth forest was a gamble but worth the risk with renewable energy projects eventually creating demand for credits.

"Going through the baseline measures opened our eyes to endangered flora and fauna values, for example peppermint gum, black cockatoo, greater glider, scarlet robin, healthland scrub."

Taking action now to add value to your business

For the Welshes, nature positive farming and measuring natural capital is a no brainer.

"Integrity around nature positive farming is critical because markets are demanding environmentally-friendly wool. So the actions we're taking now are not only helping our whole business be more resilient in a changing climate, but are also helping us adapt to regulatory and consumer changes," Jon said.

"For woolgrowers who are sitting on the fence or peering over the fence wondering if this is for them or unsure of where to start, we would say start with measuring things like soil carbon or benchmarking carbon sinks and emissions. Remote sensing technology is coming online to be able to help with measuring above ground biomass and soil carbon.

"Read whatever you can and talk to woolgrowers who have already started on the journey. Whatever steps you take will add value to your business if you can use information from measuring to make informed decisions, as well as tell your story of positive environmental management."



Claire and Jon Welsh with their wool clip.

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GROWERS SUPPORTING AUSTRALIA'S BIODIVERSITY

PH0T0S: Alex Maisey

With sheep grazing about 20% of all Australian agricultural land, woolgrowers play an important role in protecting Australia's biodiversity. AWI-funded R&D is developing a cost-efficient method for woolgrowers to generate reliable metrics of farm-scale biodiversity management to help them showcase their contributions to biodiversity conservation.

Agricultural landscapes, particularly grazing lands, are critical for conserving Australia's biodiversity because designated conservation parks and reserves alone are not enough to ensure the survival of all native species and ecosystems. Conserving biodiversity is therefore largely dependent on the actions taken by farmers in managing their land.

"With sheep grazing more than 85 million hectares, which is 20% of all Australian agricultural land, sheep and wool producers play a critical role in biodiversity conservation in Australia," said Dr Alex Maisey of La Trobe University's Research Centre for Future Landscapes, who is leading AWI-funded research into biodiversity on wool-growing properties as part of the Farming for the Future program.

"As Farming for the Future is demonstrating, woolgrowers can support diverse ecosystems and maintain agricultural productivity and profitability through sustainable land management practices.

Diverse plant and animal communities provide essential ecosystem services, including pollination, pest control, shelter, and maintenance of healthy soil and water. Diverse pollinator populations enhance crop yields, while natural enemies of pests reduce the need for chemical interventions. Healthy soil and water cycles supported by biodiversity ensure long-term agricultural productivity.

"Maintaining biodiversity on farms not only supports the environment but also offers financial and well-being benefits for farmers."

Dr Alex Maisey, La Trobe University

The La Trobe-led research shows that there are many on-ground management actions that woolgrowers can adopt that will improve biodiversity on their farms:

- Retaining remnant vegetation: Preserving remnants of native vegetation, scattered paddock trees, and native grasslands is the single most effective way to support biodiversity. These areas provide essential habitats for a wide variety of native species.
- 2. Protecting and enhancing riparian zones:
 Preserving, fencing and revegetating
 areas adjacent to waterways (termed
 'riparian zones') enhances both in-stream
 and terrestrial biodiversity. These actions
 are cost-effective and lead to improved
 ecological function and condition (think
 water quality, soil conservation).
- 3. Planting shelterbelts: Shelterbelts and windbreaks provide production benefits and can increase biodiversity, especially when they are wide (at least 20 metres), structurally complex (layered vegetation levels), and connected to remnant vegetation patches.
- 4. Revegetation: High-quality revegetation will bring species back to the farm. Less mobile species may require corridors or steppingstones of native vegetation to colonise revegetated areas.
- 5. Grazing native pastures: Native pastures support diverse invertebrate communities and increase vertebrate biodiversity. The presence of paddock trees in pastures further enhances their conservation value.

- 6. Rotational grazing: Rotational or timed grazing can improve the cover and composition of native grasses and forbs, increasing invertebrate diversity and abundance and other animals that feed on them, such as birds, reptiles and bats.
- 7. Reducing chemical inputs: Inorganic fertilisers knock out many native plant species and alter the environment to favour introduced species. Pesticides and rodenticides either directly or indirectly kill insects, birds, bats, fish and reptiles. Low input farming can reverse these impacts over time.

"By embracing sustainable land management practices that support biodiversity, woolgrowers will not only enhance their farms' resilience and contribute significantly to Australia's conservation efforts, they will also meet increasing market demands for sustainability."

Dr Alex Maisey, La Trobe University

Measuring on-farm biodiversity

Despite the benefits of woolgrowers' actions to preserve and improve on-farm biodiversity, there is a lack of data on their implementation across the industry. Without this data, assessments of biodiversity management remain largely anecdotal.

Furthermore, there is growing pressure from both international and domestic markets for primary producers to not only reduce their environmental impact but also demonstrate their sustainability credentials. As a result, there is a need for farm-scale biodiversity measures to help farmers highlight their contributions to biodiversity conservation and showcase their environmental performance.

However, collecting survey farm-scale data on plants and animals is time-consuming and expensive. AWI has therefore been investing in ways farmers can use surrogates to demonstrate their management of biodiversity.

The La Trobe team have developed a robust and cost-efficient method to generate reliable metrics for assessing biodiversity



Remnant vegetation provides ecosystem services that help maintain healthy pastures, for example, by bolstering populations of beneficial arthropod predators on the farm. PHOTO: Alex Maisey

management on wool-growing farms. It is currently at proof of concept stage.

The work involved devising specific metrics for five key components of biodiversity management and examining their relationship with survey data of native plant and bird populations collected from 50 farms in southeast Australia. The five metrics used to calculate the 'Biodiversity Management Index' (BMI) are:

- Extent of natural habitats across the farm (i.e. woodland, forest and grassland assessed using a combination of satellite imagery and farm management data)
- Condition of riparian zones (assessed using a combination of satellite imagery and farm management data)
- Ground cover (represented by average minimum ground cover measured over five years from satellite imagery)
- Diversity of habitat types on the farm (termed 'heterogeneity' assessed by satellite imagery); and
- Intensity of inputs (e.g. fertilisers, pesticides, irrigation, assessed using farm management data).

Each metric is scaled from 0 to 1 such that the final 'generic' BMI is a score out of 5.

Through calibration using empirical survey data, the researchers determined appropriate weightings for each of the five metrics for different species groupings (e.g. woodland birds, groundcover plants), enabling them to create a 'taxon-specific' 'Biodiversity Management Index' for each species group.

"We then calculated the BMI for 70 wool-producing farms participating in the Farming for the Future program. This allowed us to assess contemporary biodiversity management practices among this cohort of woolgrowers, offering valuable insights into the industry's efforts and areas for improvement," Dr Maisey said.

In general, the 70 wool producers in the Farming for the Future project were performing very well in terms of Intensity and Ground Cover, well for Heterogeneity, moderately for Riparian Condition and there was room for improvement in Habitat Extent.

"A key finding was that when we used the BMI to predict species richness, many wool-growing farms were likely to be supporting a diverse community of woodland birds and native plants. We also found a positive relationship between species richness and the amount of wool produced per hectare, demonstrating that biodiversity and wool production can co-exist," Dr Maisey explained.

The BMI serves as a critical tool for understanding and enhancing biodiversity conservation on agricultural lands, demonstrating the proactive role of sheep farmers in supporting Australia's biodiversity.



A new, two-year project is underway to help Australian woolgrowers more easily and cost-effectively provide high-quality environmental data about their farm to the supply chain.

As textile brands increasingly seek wool from farms with verified positive environmental practices, the traditional method of on-site audits by ecologists has proven too costly and time-consuming for widespread adoption by woolgrowers and their advisors.

A groundbreaking new two-year project seeks to overcome these challenges by leveraging advanced satellite imagery to consistently and efficiently measure on-farm natural capital metrics such as ground cover, tree cover, shade and shelter, and greenhouse gas sequestration.

The project is a collaboration involving AWI, La Trobe University, the Macdoch Foundation (Farming for the Future), Integrated Futures and the SmartSat Cooperative Research Centre (CRC). Funded by the Australian Government, the SmartSat CRC is a consortium of industry and research organisations dedicated to developing space and satellite technologies.

The project will utilise SmartSat CRC's 'Earth observation' capability, La Trobe University's expertise in artificial intelligence and machine learning, and Farming for the Future's extensive dataset of ground-truthed observation points, to enhance the measurement and monitoring of on-farm natural capital.

The project has a total value of \$4,865,950 (cash and in-kind) and was made possible by \$120,000 in seed funding from AWI.

AWI Program Manager, Fibre Advocacy & Eco Credentials, Angus Ireland, says the project's goal to empower Australian woolgrowers to meet market demands by cost-effectively reporting their environmental credentials.

"Measuring and reporting on natural capital is increasingly important for woolgrowers to demonstrate their environmental performance and ensure market access," Angus said.

"The new project will apply cutting edge remote sensing technology to improve the accuracy and cost-effectiveness of measuring, monitoring and reporting natural capital and environmental outcomes on a farm-scale, with the aim to increase adoption of the technology.

"It is anticipated that, once validated and implemented, the new technology will be applicable across a wide range of geographic areas and farming systems. A range of service providers such as farm advisors and farming groups will be trained and supported in its use to encourage adoption by woolgrowers.

"This project is another example of the way that AWI's is working to help woolgrowers access tools to assist them to reach their individual environmental sustainability goals and provide evidence along the supply chain of the ecocredentials of Australian wool."

SmartSat Chief Executive Officer, Prof Andy Koronios, says the project is aligned with SmartSat CRC's broader objectives to support the recently announced National Science and Research priorities.

"This project, focusing on the use of remote sensing technologies for natural capital asset classification, exemplifies SmartSat CRC's commitment to collaborative research aligned with the nation's science priorities and to use space tech innovation to help solve our current challenges on Earth."



The new project will leverage advanced satellite imagery to measure on-farm natural capital metrics such as ground cover, tree cover, shade and shelter, and greenhouse gas sequestration. PHOTO: ZambeziShark

INVESTMENT IN METHANE-REDUCING SUPPLEMENTS

The Australian sheep and wool industry has received another boost in its strategy to reduce the on-farm production of greenhouse gas emissions, with the Australian Government announcing extra funding for research into feed supplements to reduce the amount of methane that grazing sheep belch.

AWI's significant investment to reduce methane emissions from grazing sheep received another boost in August when the Australian Government announced funding for four new projects under Stage 3.2 of its Methane Emissions Reduction in Livestock (MERIL) Program.

The new MERiL grant provides a further \$3 million from the Australian Government for the projects' partners to investigate the efficacy and delivery of combinations of sheep feed additives to improve methane abatement as well as productivity.

The new stage, which will run for 2.5 years, addresses two key aspects: feed additive combinations and delivery methods. These four projects build on five other AWI and Australian Government co-funded projects under the MERIL program (see below).

"This work sits within the National Sheep Methane Program (NSMP) which is a collaborative and coordinated effort between AWI and the departments of primary industries and universities in the main wool producing states, to implement practical and safe ways for producers to reduce methane emissions from Australian sheep grazing systems," said AWI's Program Manager, Fibre Advocacy & Eco Credentials, Angus Ireland.

"Throughout our engagement in the NSMP, every MERIL project funded by AWI has been supported

and co-funded by the Australian Government, providing good leveraging of woolgrower funding. Every \$1 invested by AWI in this latest stage is matched by \$6 from the Australian Government, together with further funding and in-kind services from the project partners."

The first goal of the new funding, additive combinations, will be the focus of the University of Western Australia (UWA) and University of New England (UNE). They will assess combining different classes of feed additives and ingredients, such as the rumen modifier Agolin Ruminant, to reduce methane emissions from grazing sheep and also increase productivity.

The second goal, delivery methods to grazing sheep, will be the focus of the Department of Primary Industries and Regions South Australia (PIRSA) and NSW Department of Primary Industries and Regional Development (DPIRD). PIRSA will examine the supply via drinking water and loose licks of antimethanogenic additives and previously untested combinations. NSW DPIRD will focus on identifying more effective intake of feed additives across the flock such as the effects of changing the mob size per feeder, the number of feeders in a paddock and the response to different additives.

"AWI is committed to helping reduce the wool industry's environmental impact across the whole supply chain, with the farming stage being a key focus for reducing greenhouse gas emissions," Angus said.

"For every dollar invested by AWI in these four new projects, the Australian Government will provide six dollars and our partners will provide further funding and in-kind-services, which is a good leverage of woolgrower funding."

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

Previous MERIL funding

This new funding is in addition to these five projects that are already receiving funding from the Federal Government under the MERiL program.

Project under Stage 3 of the MERiL program (announced in March 2023):

 To assess methane emissions at the flock and individual level under grazing of the three major methane-reducing additives to sheep at different feeding rates and meal frequency – Asparagopsis, Bovaer and Agolin (in collaboration with UNE, PIRSA, UWA and Feedworks).

Projects under Stage 2 of the MERiL program (announced in October 2022):

- To fast track the development of new technology solutions for delivering low emission supplements to grazing sheep at large-scale as a feed additive or via drinking water (in collaboration with PIRSA, UWA, Rumin8 and Feedworks).
- To evaluate the feasibility of using Radio Frequency Identification technologies to improve methanereduction supplement design and delivery in conjunction with common delivery systems such as lick feeders (in collaboration with the NSW DPIRD).
- To develop a novel paddock solution to deliver methane-reducing supplements to grazing sheep (in collaboration with UNE and Feedworks).

Project under Stage 1 of the MERiL program (announced in February 2022):

 To undertake grazing and pen studies in northern NSW to quantify the relationship between the intake of the red algae Asparagopsis and the daily methane produced by grazing sheep, plus any associated wool and live weight changes in the sheep (in collaboration with UNE and Sea Forest).



Thanks to extra funding from the Australian Government, more research will soon get underway into reducing the amount of methane that sheep belch. PHOTO: tracielouise

Good conception and lamb marking rates are key to a successful sheep business. Find out how you can maximise lamb numbers by joining a Lifetime Ewe Management (LTEM) group in your area.

Being involved in an LTEM course gives you the skills and support to make feeding and managing your ewes easier. Working with groups of 5-7 farmers who meet six times in 12 months, your trainer, an experienced sheep consultant, will work with you to:

- Learn how to condition score
- Prepare ewes for joining
- Manage single and twin-bearing ewes at different stages of their reproductive cycle
- Assess pasture and calculate supplementary feeding rates
- Set up lambing paddocks
- Form weaning strategies to maximise weaner survival and improve lifetime productivity
- Set targets for condition score, conception, lamb survival, ewe mortality, lamb growth rate and feed on offer.

More than 5,000 Australian producers have taken part in LTEM, representing 30% of the national flock. On average, producers increase stocking rate by 9.3%, marking and weaning rates by 7%, and reduce ewe mortality by 25%.

An independent assessment of all the Australian sheep industry's sheep reproduction extension activities concluded that the LTEM program was the one that has had the most influence on sheep reproduction efficiency. The study estimated the benefit/cost ratio of the program was 8.5.

LTEM was developed using research outcomes of the AWI-funded Lifetime Wool project (lifetimewool.com.au), which ran from 2001 to 2008, and involved growers and researchers in WA, Vic. NSW and SA.

The cost of LTEM is \$2,450 plus GST per participant. AWI offers eligible woolgrowers a subsidy of \$900 bringing the course cost to \$1,550 plus GST per participant.

More information: www.wool.com/LTEM

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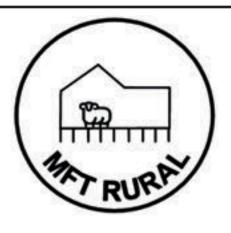
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The Australian Wool Traceability Hub, a platform designed to enhance traceability across the Australian wool supply chain, has been officially launched and is now available to woolgrowers as well as wool sellers and buyers.

Key features

- Central location for woolgrowers, sellers and buyers to access their sale lot information, including location and test results.
- Woolgrowers can access a comprehensive view of their clip and mob information.
- Traceability overview displays the location of your wool at every stage of the journey from farm to first stage processor.
- Leverages data already shared within the Australian wool industry.
- Full control over access to data via inbuilt user data access controls.
- Buyers can view their order information and export traceability reports to share with their clients.
- Emergency Animal Disease (EAD) data repository for exclusive use by Chief Veterinary Officers.

An industry-owned and -led initiative, the Australian Wool Traceability Hub (the Hub) was officially launched on 29 July. The Hub is an essential tool for the Australian wool industry to get ahead of the curve when it comes to

Australian wool's Emergency Animal Disease (EAD) response plan as well as commercial traceability from farm to first stage processor.

The Hub represents a significant industry collaboration, bringing together industry bodies including the Australian Council of Wool Exporters and Processors (ACWEP), Australian Wool Exchange (AWEX), Australian Wool Handlers (AWH), Australian Wool Innovation (AWI), Australian Wool Testing Authority (AWTA), National Council of Wool Brokers of Australia (NCWBA) and WoolProducers Australia (WPA).

"Through the Hub, we are reinforcing the industry's dedication to transparency and responsible practices," said AWI CEO, John Roberts. "The Hub will serve as a testament to our collective efforts to maintain the integrity and trust that Australian wool is known for worldwide."

The Hub will provide 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 leverage Australia's world-leading wool identification and traceability technologies, WoolClip and eBale," said AWEX CEO, Mark Grave. "WoolClip is the on-farm digital data capture tool for Australian woolgrowers which easily allows growers to scan eBales at the source of origin and record each bale's unique

identifying number. With continued adoption and use of eBale and WoolClip, woolgrowers can be key contributors to Australian wool's traceability data that will enable the Hub."

The woolgrower's Property Identification Code (PIC) will be an essential requirement of the Hub. "The PIC is the starting point for the whole traceability pathway: where was this wool produced?" said President of the NCWSBA, Rowan Woods. "The wool industry is competing for market share, and to be a viable competitor in that market, we must confidently be able to start the whole process by proudly declaring where the wool came from. The PIC does that."

The Hub also aims to assist industry and government manage potential EAD outbreaks in a quicker and more efficient manner, by providing the location of wool from the farm to the wool store, wool dump or shipping containers and all the way to processing locations.

It is anticipated that more than 90% of bales will be able to be traced using the Hub by July 2025.

The nation's wool testing authority AWTA will manage and operate the Hub on behalf of the industry, overseen by Wool Industries Australia Inc.

More information: www.awth.com.au

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Elders has recently established a world-first automated wool handling business, which is a clear indication of the company's confidence in the wool industry and its growth.

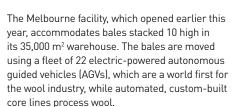


The new Elders wool handling facilities in Melbourne, which are a significant investment in the future of the Australian wool industry.

Elders' commitment to the Australian wool industry has only grown since the Elder family first began buying, financing and handling wool in the mid-1800s. Now handling more than 350,000 bales of wool each year, Elders continues to adapt and innovate in a changing wool industry by establishing a world-first automated wool handling business, Elders Wool.

Elders has invested \$25 million in the new wool handling business, the largest single investment in wool handling this century, signifying a long-term commitment to the Australian wool industry.

The wool handling operation is based around two centralised hubs, in Melbourne and Perth, supported by an extensive network of receival centres



The AGVs are self-driving, laser-guided vehicles that can operate 24 hours a day before recharging for 90 minutes. Powered by on-roof solar, Elders say the AGVs use significantly less energy than human-driven forklifts and provide significant long-term operational and safety benefits.

The Perth facility, which opened in July 2023, combines wool sales activities with storage and handling operations, aiming to improve efficiency in the wool supply chain.



The bales are moved using electric-powered autonomous guided vehicles,, which are a world first for the wool industry.

"We want to ensure we deliver the best results for the next generation of wool growers across Australia."

> Mark Allison, Elders Managing Director and CEO

Elders Managing Director and CEO Mark Allison says that the new business is an investment in the future of Australian wool and will revolutionise wool handling.

"Elders is committed to providing exceptional customer service and contributing to the future success of our growers and the wool industry. We are demonstrating this commitment by continual investment in supply chain optimisation, including the logistics, sampling, sales and storage of wool through automated warehouse operations," Mr Allison said.

"Elders recognises that the landscape of the Australian wool industry has changed dramatically in the last three decades and it is critical to adapt and change for Australian fibre to remain some of the best in the world.

"To this end, in making the largest single supply chain investment in the Australian wool industry this century, we stand with our customers to deliver the best sustainable wool supply globally.

"The long-term sustainability of the wool industry and improved outcomes for our clients is our key priority."

AWI CEO John Roberts congratulated Elders on investing in innovation and the future of the Australian wool industry.

"Serving woolgrowers and keeping wool efficient and relevant has always been my key priority. To see Elders deliver this level of commitment and innovation to our industry is not only highly motivating for all industry participants, but symbolic of the belief and fortitude Elders have had for wool and woolgrowers for more than 185 years," John said.

"Despite some terribly challenging times for our industry, Elders has once again illustrated their faith in our fibre, and its future."

Elders Wool complements Elders' existing wool offering, with existing wool selling centres in Yennora, Brooklyn and Spearwood remaining in operation. Clients also continue to have access to a wide range of wool selling tools through Elders, including auction, auction forward, and Wooltrade.

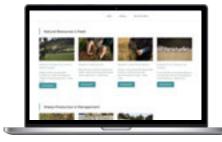
'MAKING MORE FROM SHEEP' BEST PRACTICE RESOURCE

Are you a youngster interested in learning about the key profit drivers in a sheep and wool enterprise? Or maybe you've been in the industry for a while and would like a refresher on some key management practices? If so, take a look at the revamped Making More From Sheep online information package.

Making More From Sheep (MMFS) is a free, 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 has continued their investment in its development. The handy education package has recently had a complete review and been updated to include the latest sheep industry research, tools and information on husbandry and management. It also includes fact sheets, videos, podcasts, presentations, conference recordings and more.



The updated MMFS website was relaunched last month.

The 12 Modules are the backbone of MMFS and cover all aspects of sheep and wool production making it a valuable go-to guide:

- 1. Plan for success
- 2. Market focused wool production
- Market focused lamb and sheepmeat production
- 4. Capable and confident people
- 5. Protect your farm's natural assets
- 6. Healthy soils
- 7. Grow more pasture
- 8. Turn pasture into product
- 9. Boost business with breeding
- 10. Wean more lambs
- 11. Healthy and contented sheep
- 12. Efficient pastoral production

The Modules can be used as a standalone resource for producers to look for information on something specific or they can use the complete MMFS as a manual-style education

program. In addition, a Making More From Sheep eLearning course has been developed which is available on AWI's online Woolmark Learning Centre platform available at www.woolmarklearningcentre.com.

"The MMFS package of resources, generated from years of research and on-farm experience, is part of AWI's continuing commitment to delivering practical on-farm knowledge to help woolgrowers increase the long-term sustainability and profitability of wool production, paving the way for a successful industry for the next generation," said AWI National Extension Manager, Emily King.

"The best-practice principles covered in MMFS support a sustainable and profitable sheep and wool operation, helping to reduce costs and optimise production while minimising risk in an ever-changing environment"

More information:

www.makingmorefromsheep.com.au



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MORE RESEARCH NEEDED INTO FLYSTRIKE VACCINE

Researchers have completed a four-year, AWI-funded preliminary project into the development of a commercial vaccine aimed at helping protect sheep from the Australian sheep blowfly. Results, whilst encouraging, were mixed, with more research needed to advance development.

 $R^{\text{esearch supported by AWI funding has}} \\$ sheep blowfly by researchers at University of Melbourne and enabled CSIRO researchers to apply new and emerging technologies to work towards the development of a vaccine to protect Australian sheep from flystrike.

"A flystrike vaccine, if successfully developed, would provide the wool industry with a paradigm-shift in flystrike control. It would reduce the use and reliance on chemical insecticides and breech modification, and would help garner the support of the supply chain through to consumers," said AWI Program Manager, Animal Wellbeing and Industry Resilience, Carolina Diaz.

"A vaccine would have a near immediate effect on the industry because it could be administered rapidly across the entire sheep flock and provide a long-term solution to the flystrike problem. As a vaccine stimulates the immune system, it would not restrict protection to just the breech but would provide whole body protection to the sheep."

For more than a century, vaccine technology has been demonstrated as an effective treatment for a range of bacterial and viral diseases. However, sheep blowfly larvae are incredibly tough and resilient organisms with a short period of parasite-host interaction, which presents a significant challenge for the development of a vaccine against them.

The larvae spend a reasonably short period of time on the sheep after the adult fly lays its eggs in the fleece. Within about 72-96 hours. the larvae have hatched, undergone three moults and drop off into the dirt to pupate. This means that a vaccine needs to target and take effect on the larvae immediately they interact with the host sheep.

During this ambitious project, CSIRO explored a range of genomic and molecular approaches for the formulation of prototype vaccines that target key proteins in the blowfly larvae. It tested 93 different formulations of vaccines in approximately 500 sheep.

The results from the project were highly variable with a range of potential vaccine antigens investigated. The laboratory in vitro larval assessments of the two lead vaccine formulations were encouraging with up to 75% efficacy in reducing larval growth. This is an excellent result and well within the range of a successful vaccine if it can be translated to on-sheep efficacy. However, repeat in vivo testing on sheep showed a much lower indication of efficacy (<25%) in reducing larval growth on sheep.

These key next steps in research are therefore required to achieve the development of an effective flystrike vaccine. Any further development is crucially dependent on industry support and funds being available from AWI.

"With the critical support of woolgrowers through AWI research funding to date, we feel substantial gains have been made in the incremental progress to develop a flystrike vaccine," said lead researcher Tony Vuocolo of CSIRO.

"While an effective on-farm vaccine is still hard to achieve, the lessons from this recent project will help guide and improve future efforts in creating a vaccine, which could greatly benefit the wool industry in the long run."

Additional studies undertaken in this project assessed the impact of several adjuvants (ingredients in the vaccine that help create a stronger immune response), vaccine dose, administration route and longevity of the immune response to the leading trial vaccine formulations. Results indicated the potential of an initial two-dose vaccine and subsequent annual vaccine dose, dependent on the efficacy of a developed vaccine with proposed next stage research into vaccine formulation and delivery advancing this goal.



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.

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 full suite of resources in the AWI Flystrike Extension Program are now available for woolgrowers.

I 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 good long-term strategy to minimise flystrike. Short-term preventative activities include shearing or crutching to remove wool and dags, applying appropriate chemical treatments, reducing the risk of scouring which causes dags, careful selection of less flystrike-prone paddocks, and killing maggots and removing sources of protein.

2. Monitoring to detect flystrike

Monitor all mobs of sheep for signs of flystrike during high-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 alone. 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.

AWI's 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 crutching, optimise chemical use and increase whole farm profitability.

With the recent rollout of StrateFly[™] workshops and AmpliFly[™] one-on-one coaching, all six components of AWI's Flystrike Extension Program are now available to woolgrowers to support their flystrike management – **see below.**

It's Fly Time!™

Practical, just-in-time information in the lead up to, and during, high-risk flystrike periods.

DemystiFly!™

Practical information about managing chemical resistance in blowflies.

SimpliFly!™

A one-day **workshop** to develop a property-specific strategic flystrike management plan.

ClassiFly!™

A one-day **workshop** with demos to increase understanding and skills in breeding for flystrike resistance.

StrateFly!™

to develop a
property-specific strategy
for moving to a
non-mulesed enterprise

AmpliFly!™

One-on-one coaching and support from an accredited advisor to assist you prevent and control flystrike.

More information:

- · Information on the above six resources in AWI's Flystrike Extension Program is available at www.wool.com/flystrikeresources
- For information on SimpliFly™, ClassiFly™ and StrateFly™ workshops available near you, contact the AWI grower extension network in your state and sign up to their free newsletters. You can find your network at **www.wool.com/networks** or call AWI on 1800 070 099.
- · More detailed information on flystrike management, including access to interactive decision support tools, is at www.flyboss.com.au
- Information on AWI's flystrike research, development and extension program is at www.wool.com/flystrike























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BREECH STRIKE AND BODY STRIKE BREEDING VALUES

Can genomics and a Merino reference flock increase the rate of genetic gain in breeding for breech and body strike resistance and profitability? So far, the answer is yes, but more R&D is required and how best to fund an ongoing industry genomics reference flock for all traits needs to be confirmed.

AWI with the Animal Genetics Breeding Unit [AGBU] is investigating flystrike and DNA results from R&D flocks and private flocks to first produce 'within flock' breech and body strike breeding values and then 'across flock' multi trait Australian Sheep Breeding Values [ASBVs] in the next few years.

The first within flock breeding values for breech and body strike were produced for Grant and Annette Burbidge early this year and the first across flock breech strike values were presented at the New England Merino Lifetime Productivity [MLP] Field Day in May.

While breech wrinkle and dag are correlated with flystrike, some more wrinkly and daggy sheep don't get struck and some low wrinkle and low dag sheep do. So, while these indirect indicator traits are good indicators, greater accuracy is invariably gained by directly measuring the trait itself. This increases the rate of genetic gain.

Secondly, by directly measuring the trait, it is likely to mean that breech wrinkle and dag will not need to be reduced as much. The target of all sheep being 2 score or less for breech wrinkle and dag may be able to increase to say 2.5 score, and the same is likely to apply to body strike. This will assist Merino types that are naturally more susceptible to breech and body strike.

Breech strike and body strike are hard to measure traits and prime candidates for assistance from the ever-expanding benefits of using genomic selection.

Genomics improves the impact of pedigree relationships (from close and distant relatives) and the influence of known associations between a genotype and the expression of the trait, in this case breech and body strike. A genomics reference flock will be required for breech and body strike so that animals without a direct measure can gain a valuable predictive breeding value.

Burbidge Farms, Tarcutta

Grant and Annette Burbidge run 28,000 fine wool sheep in 800 to 900 mm rainfall country at Tarcutta in southern NSW. They breed their own rams within their 'Connemara Stud' with an Adult Fibre Diameter (FD) ASBV of -3.6 and Adult Clean Fleece Weight (CFW) ASBV of +10%.



Dr Elena Dehnavi of AGBU with **Grant and Annette Burbidge** of Burbidge Farms, Tarcutta, at the New England MLP Field Day in May 2024.

Grant and Annette are keen to push the productivity and welfare credentials further but have been disappointed at the higher flystrike risk in some of the progeny of introduced AI sires in their country and management regime.

"Since the 2017 drop we have collected breech and body strike phenotypes along with struck and non-struck genotypes in the ram breeding flock. Young sheep are crutched at normal times, chemical preventative treatments are not used, but the sheep are intensively inspected, recorded and treated during the risk periods," Grant said.

"We have now recorded over 700 breech and body strike phenotypes and 2,300 50K DNA genotypes."

Dr Elena Dehnavi of AGBU with the support of Professors Daniel Brown and Andrew Swan created within flock breeding values for their 2022 drop animals ahead of ewe and sire selection for the 2024 drop joining. Grant and Annette were impressed with the results.

"Obviously any struck progeny had high risk breeding values but what interested us the most were the range of breeding values in the unstruck animals," Grant said.

"We are happy to share our data and results with the information from the old and new R&D flocks, to create the across flock breeding values that will become available to all ram breeders to help improve animal welfare and profitability.

"Thanks also to Dr Julius van der Werf and UNE who have provided valuable assistance to our work."

CSIRO New England MLP Flock, Uralla

Dr Jen Smith and the staff at the CSIRO Chiswick Research Station have collected strike phenotypes and genotypes in the AWI Breeding for Breech Strike Resistance Flock and MLP New England Flock.

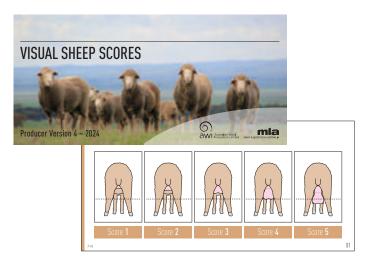
"AGBU produced across flock research breeding values (RBV) for breech strike for the MLP Field Day but the body strike incidence for the sires had been too low to release a Body Strike RBV," she said. "Genomics offers some real advantages for welfare traits; a lot of data is needed but I think it could become a great option for ram breeders in the future."

Other industry pilot flocks

Twelve ram breeder flocks and five Merino Sire Evaluation sites have commenced collecting flystrike phenotypes and genotypes (although some have had low expression over the recent fly season), and other interested producers will join in once within flocks breeding values can be reported back to them next year. The aim, depending on sufficient data, is to release ASBVs in 2027. Ben Swain from BCS Agribusiness is coordinating the data collection from industry flocks and can be contact via email ben. swain@bcsagribusiness.com.au or phone 0427 100 542.

VISUAL SHEEP SCORES GUIDE UPDATED FOR 2024

The Visual Sheep Scores guide is a pocket guide for commercial and stud sheep breeders. providing a standardised framework for assessing and scoring visual traits for all breeds of sheep.



The cover and sample page (Udder Depth) from the updated Visual Sheep Scores guide.

The widely used Visual Sheep Scores booklet has recently been reviewed, and version 4 of the industry standard for visual scoring is now available in hard copy and online (PDF) versions.

The review, carried out through industry-wide consultation with users of the scores, has resulted in the addition of a range of new scores as well as the adjustments and improvements to current scores to make them easier to understand and record.

First published in 2007 by AWI and MLA, in conjunction with Sheep Genetics and the Australian Merino Sire Evaluation Association, the Visual Sheep Scores guide provides a common language across all sheep breeds to evaluate and record economically important visual traits.

Version 4 sees the addition of a further two sets of visual scores that can help stud and commercial sheep breeders improve their flocks even further.

Firstly, five new feet and legs scores have been added. These are Hocks, Front legs, Pasterns, Front toes and Back toes. The individual component traits describing the structure of the feet and legs replace the previous combined feet and leg score. These new scores, firstly drafted by the Balmoral Breeders group which manages the long-running and very successful Balmoral Merino Sire Evaluation trial in western Victoria, are aimed at teasing apart the many factors that are important to overall feet and leg conformation.

Tom Silcock, a long-time member of Balmoral Breeders, says that over many years of feet and leg scoring the sire evaluation progeny in the trials that they run, it became obvious to them that the original scoring system was not giving them all the information they needed.

"By focusing on the individual component traits, we are better able to identify the specific areas that are leading to feet and leg faults and can work on improving those," Tom said.

The other new traits included in the Visual Sheep Scores guide are **three** udder and teat scores. Developed as part of an add-on project to the Merino Lifetime Productivity (MLP) project at the New England trial site in northern NSW, the new scores are Udder depth, Teat size and Teat placement.

Lead researcher on the MLP add-on project, Erin Smith from the University of New England, says that her work was able to show that the three new udder and teat scores were not only heritable and therefore able to be selected for, but were associated to both lamb survival and weaning weight.

"We looked at a range of udder and teat traits over the course of the New England MLP trial. Udder depth, Teat size and Teat placement were shown to offer the largest benefit to breeders when scored, whilst being relatively easy to assess either at lambing itself or through to weaning," Erin said.

By using a standard scoring system for visual traits and having records submitted to the Sheep Genetics MERINOSELECT database, Australian Sheep Breeding Values (ASBVs) will be able to be developed for these new traits over time to allow breeders to compare the genetic potential of sheep regardless of the environment they are managed in.

More information: Download at www.wool.com/vss-2024 or order a hard copy by emailing merinosuperiorsires@bcsagribusiness.com.au



PREDICTING SUCCESS IN ARTIFICIAL INSEMINATION

New research has determined the critical factors that influence the probability of pregnancy following the laparoscopic artificial insemination (AI) of sheep.

Cuccessful artificial breeding underpins genetic evaluation through link sires and the rapid genetic and production gains for woolgrowers through large-scale use of proven elite sires and dams.

Historically, laparoscopic artificial insemination (AI) within the Merino industry has been considered reasonably successful. However, anecdotal reports of increasingly low and variable conception rates following artificial breeding programs have placed AI at the risk of waning adoption both in the size and number of programs.

Led by Dr Jessica Rickard alongside PhD candidate Eloise Spanner and Professor Simon de Graaf, the team at The University of Sydney investigated the effect of male and female factors on the variability of successful AI programs within the Australian Merino industry over the 2021, 2022 and 2023 seasons.

Their goal was to understand the interplay between fertility traits and create a predictive model for pregnancy to improve the results and reliability of laparoscopic AI.

This project was supported by AWI, Australian

Merino Sire Evaluation Association (AMSEA), sheep artificial breeding companies, and sheep producers from WA, Victoria, NSW and SA.

Data was collected from 30 different sites over the three breeding seasons from 30,254 Merino ewes and 388 Merino rams, forming Australia's largest AI dataset focusing on individual ewe fertility.

Data on female factors collected during AI included the age of the ewe, sire inseminated, uterine tone (1: pale/flaccid to 5: turgid/pink), intra-abdominal fat (1: little to no fat present to 5: high fat) and the time of AI post-CIDR removal.

Pivotal to the success of this project was the assessment of a subset of the sires' semen used during insemination which was conducted at The University of Sydney. This included determining the concentration, morphology, motility, DNA integrity, viability, oxidative stress, and membrane status of sperm 0-6 hours postthaw. Together, these factors were placed in a multifactorial logistic binomial regression model to explain pregnancy results obtained following scanning approximately 55 days post-Al.

Research results

Analysis of the results has recently been completed. The critical factors were found to be:

- Concentration which sperm was frozen (a proxy for subsequent insemination dose or the number of sperm deposited in the ewe)
- Motility recorded at 0 hours post-thaw
- Percentage of viable, acrosome intact sperm at 6 hours post-thaw
- Percentage of abnormal sperm morphology
- Uterine tone score of ewes; and
- Intra-abdominal fat score of ewes.

These six factors significantly influenced the likelihood of pregnancy occurring following laparoscopic AI in sheep.

The performance of this model was then validated using a new dataset to predict pregnancy outcomes. Semen was collected from 26 rams and artificially inseminated laparoscopically into 1,269 synchronised Merino ewes. Fertility traits were recorded and examined



The team at 'Ejanding' near Dowerin in Central Wheatbelt of WA with researchers involved in the Predictors of Al Success trial.

as per the previous data collection. The model predicted pregnancy probabilities for each ewe, which was then compared to the pregnancy results determined by ultrasound. There was no statistical difference between the predicted and actual pregnancy results (P=0.184). This suggests that the model can fundamentally predict the likelihood of pregnancy occurring in a ewe using the six critical factors above.

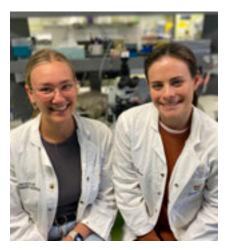
Information on the project and its potential outcomes have been presented to industry at presentations during the 2023 Yardstick and 2024 New England field day and at an Australian Merino Sire Evaluation General Meeting. Further project results will be published in open access peer-reviewed journals and upcoming industry field days.

These results are an important step for the sheep artificial breeding industry in helping to establish semen standards which could be used to standardise the assessment of ram semen. With industry consultation being planned in Australia later this year, these standards could be optimised and used to pre-screen ewes, sires and semen samples prior to artificial breeding programs. Suboptimal samples could be eliminated, increasing the likelihood of pregnancy success and reducing the incidence of variable results around Australia. This will lead to increased confidence in laparoscopic Al, an increase in the use of elite semen and an increase in productivity and profitability for Australia's woolgrowers.

Dr Rickard and the team at The University of Sydney would like to extend their thanks to the many stud Merino breeders, artificial breeding companies, AMSEA representatives and site managers for their support, engagement and donation of data over the last three years of the project. Without their involvement, the project would not have been possible.

More information:

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PhD candidate Eloise Spanner and project supervisor Dr Jess Rickard, University of Sydney



Woolgrowers, we need you!

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There are opportunities for woolgrowers across the country to be at the forefront of cutting edge research and receive early access to R&D outputs. Opportunities currently exist in these projects:

- Supplementary feeding strategies for lamb survival
- Developing new blowfly lure technology
- Informed modelling of sheep blowfly chemical resistance
- Genetics of foot health
- AWI Flystrike Genomics Reference Flock
- Australian Merino Sire Evaluation

wool.com/getinvolved



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, the Australian Merino Sire Evaluation Association (AMSEA), nominating stud Merino breeders and site partners.

- Balmoral, Vic
 Partner: Tuloona Pastoral
 Committee: Balmoral
 Breeders Association
- Pingelly, WA
 Partner: Murdoch University/UWA
 Committee: Federation of
 Performance Sheep Breeders
 (WA Branch)
- MerinoLink, Temora, NSW Partner: Moses & Son Committee: MerinoLink Inc.
- Macquarie, Trangie, NSW Partner: NSW DPI Committee: Macquarie Sire Evaluation Association
- New England, NSW
 Partner: CSIR0
 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, objective assessments 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 now and into the future.

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

The final MLP project sheep field day was held at the New England site, where research breeding values for flystrike were also launched.



Attendees listening to pen side presentations at the New England field day.

The last of the Merino Lifetime Productivity [MLP] project data was collected in July 2024, rounding out nearly 10 years of data collection which has seen the creation of approximately 2,000,070 data points. The project will now focus on the core project analysis, generating outcomes to help enhance breeding and selection systems to produce ewes that are more productive through life.

Ahead of the final shearing event at the New England site in July, an enthusiastic crowd of more than 100 attendees gathered on 29 May for the final sheep field day at CSIRO's Chiswick property. The display of 30 pens of ewes, the daughters of industry sires, garnered significant interest along with the newly released breech strike research breeding values (see page 28).



Dr Jen Smith, CSIRO, addressing the New England field day.

On the day, the MLP New England site manager Dr Jen Smith explained to the crowd that the 6- to 7-year-old ewes had experienced a reasonable season over the past year with an exceptional conception result resulting in an average of 146% lambs weaned to ewes joined. Despite raising a significant number of lambs, the ewes had regained their condition and presented well on the day.

Hearing from the classers

Classers for the MLP site, Angus Carter from Nutrien and Andrew Calvert of Wool Solutions, both spoke at the final sheep field day.

Angus Carter highlighted the 25% variation in performance among the progeny groups and emphasised the power of genetics from just one generation of progeny. He explained his approach to classing using a triangle model, with (1) structure and size on one side, (2) fleece weight on another, and (3) micron on the third side. He said that focussing too much on one side sacrifices the benefits of the others, advocating for a balanced approach in the middle. Angus also mentioned that he looks for nourishment in the tip, not too much face cover, and good feet which are needed in the wet New England conditions.

Andrew Calvert commended the sire owners for entering their sires into the lifetime evaluation with the industry scrutiny that came with it. He also congratulated CSIRO on the management of the sheep, suggesting that if sheep are managed well they can express their full genetic potential. Andrew described



Andrew Calvert, Wool Solutions, with classed as the top 1% New England 2018 drop ewes.

the classing approach he was tasked with, the Professional class, a five-way approach that selected the top 1% for use in an ET donor program or similar, the next 10% for a stud nucleus, followed by flocks, sales and then culls. He emphasised a strong focus on structure, selecting sheep that are sound on their feet before considering their wool and other attributes.

Launching Flystrike Research Breeding Values

Professor Daniel Brown from the Animal Genetics Breeding Unit (AGBU) introduced the newly released Breech strike research breeding values (RBVs) that are the result of combining many years of research data with more recently collected on-farm data including records from the New England MLP site. The development work has been funded by AWI and carried out by AGBU's Dr Elena Dehnavi who combined the flystrike data across available data sources with genotypes to generate the RBVs. The RBVs indicate a probability of being flystruck and range from -1 to 1. Further work will go into the RBVs



Sire entrant **Hugh Nivison** in front of the progeny of Mirani 120021.

before they are released as Australian Sheep Breeding Values (ASBVs) by 2027.

Last of the MLP project sire introductions

The ever-popular sire introductions and results explanation was delivered at the field day by Ben Swain, Executive Officer for the Australian Merino Sire Evaluation Association. Including the sire's background, the reasons for their selection, and an overview of their daughters' performance, sire introductions have been delivered at all five MLP sites. Feedback from each field day indicated that these introductions were an enormously valuable component of the MLP field days.

Engaging presentations

In addition to introducing the sires, MLP project field days have featured industry presentations. At the New England field day, AWI's Geoff Lindon discussed the upcoming steps for the MLP project's analysis. CSIRO researcher Amy Bell presented their collaborative work with AWI, which aims to develop a process for selecting Merinos with increased resilience by assessing immune

competence and indicator traits. Professor Daniel Brown detailed the AWI-funded efforts to develop ASBVs for flystrike, and Dr Jen Smith, on behalf of Erin Smith, highlighted the crucial role udder structure plays in lamb survival and weaning weights and outlined three new udder and teat traits that have been developed using data collected on the New England MLP F1 ewes.

Next steps

Following the field day, the New England ewes were shorn for the last time ahead of off-shears visual trait scoring which signalled the completion of the MLP project data collection. The ewes will go on to be assessed for methane production and feed intake in a project funded by MLA, UNE and NSW DPIRD.

Thanking the New England site

AWI thanks the New England site that has been hosted by CSIRO in partnership with the New England Merino Sire Evaluation Association. The CSIRO team was led by Dr Jen Smith and supported by a highly capable technical team that included Amy Bell, Graham Acton, Duncan Elks, Grant Uphill and Heather Brewer. AWI also recognises the Chiswick farm staff for their support of the project.

The New England site committee was initially chaired by Duncan Lance during which time several successful field days were held, including an online version during COVID. Mid-way through the trial, local stud breeder Todd Whillock took over the reins and led the site through the last two well attended field days. Many thanks to the site committee members who helped in the early stages of data collection, and with the success of the field days.

Guiding the site through drought, flood, and COVID was no mean feat. AWI extends its thanks to Jen, the CSIRO team, the site committee for their dedication and for maintaining such a high standard of data quality.



Left to right: AWI's Geoff Lindon, and AGBU's Professor Daniel Brown and Dr Elena Dehnavi.

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



LEADAg Plus program, Longreach

In Queensland, AWI supported the LEADAg Plus program, developed and delivered by CHRRUP. Amongst other activities, the 18-30 year olds in the two-week program experienced the steps involved in wool harvesting, wool classing and sheep handling thanks to trainers from AWI and property hosts Scott Counsell of 'Lyndon' at Barcaldine and Mick Campbell of 'Bimerah' at Stonehenge.

Sheep Week, Crookwell

As part of the Australian Agricultural Centre's Sheep Week in June, AWI presented Learn About Wool lessons to young students from several primary schools in the Southern Tablelands and Canberra regions (pictured right).



WA Young Sheep Handlers Expo, Perth

Attended by AWI, the inaugural WA Young Sheep Handlers Expo was held at Claremont Showgrounds in Perth during two days in July. The young participants deepened their knowledge of sheep and wool – nutrition, behaviour, biosecurity, handling, purpose and much more – and left with an understanding of the various career pathways in the industry.





Discover Ag 2024, Sydney

AWI took part in the foremost agricultural careers expo in Australia, Discover Ag 2024, run by the Royal Agricultural Society of NSW in June at the Sydney Showground. It was a great chance to get in front of 700 secondary school students in Years 8-12 to showcase the wide range of career opportunities open to them in the wool industry.



Young people can learn about career opportunities in the wool industry at www.learnaboutwool.com/careers-hub





SHI

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

he young participants in the tenth annual Hay Inc Rural Education Program came to together in June for their third and final training week, which was followed by their graduation at the Hay Merino Sheep Show 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. nearly 150 young people have now been given the opportunity to learn the practical agricultural skills needed for them to get jobs 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, covering topics based around the production calendar for sheep and wool production. We also engage Tocal and TAFE trainers for some of the training."

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 sheep handling and yard work; shearing, wool handling and wool shed management; sheep health and nutrition, pregnancy scanning, lamb marking and lamb postmortems; and Merino sheep classing.

Other topics included working dog training; fence construction and maintenance; on-farm butchering; quad bike and motorbike operation and maintenance; and farm health, safety and first aid. There was also a discussion with an Ag Careers Panel about careers in the industry.

AWI has supported the Hay Inc program each year it has been held since its inception and has committed funding until the 2025 program.

"By supporting industry-led programs like this, AWI is improving the skills and engagement of young people interested in working in the wool industry, thereby helping ensure they remain," said AWI National Extension Manager, Emily King.





The Hay Inc Rural Education Program included a wide range of topics, from sheep health (pictured top at T.A. Field Estates' 'Wyvern', Carrathool) to wool harvesting (pictured bottom at Paraway Pastoral's 'Steam Plains', Conargo).

The application form for the 2025 program is available on the Hay Inc website. Employers can send their employees on the program or other interested young people can apply directly. Applicants can be from anywhere and do not have to be from the Hay district. Scholarships for graduates of the program are also available.



More information: www.hayinc.com.au

BIOCONTROL STRATEGY THE HELP COMBAT RABBITS

The release of a new national biocontrol strategy will spearhead R&D efforts to reduce rabbit numbers, delivering welcome economic and environmental benefits to woolgrowers and other landholders.

he release of Australia's Rabbit Biocontrol Pipeline Strategy in May by the Centre for Invasive Species Solutions (CISS) will drive R&D efforts to reduce rabbit numbers. The Strategy outlines 10 recommendations to improve the use of existing biocontrol agents and develop new biocontrol tools. It has been endorsed by all Australian governments at State and Federal levels.

"Given that rabbits and viral biocontrol agents are in an 'arms race', a pipeline of biocontrol agents needs to be developed and ideally with a release every 10 to 15 years, to keep rabbit impacts in check," said the Chief Executive of CISS, Andreas Glanznig.

"Without this strategic national R&D approach to deliver new biocontrol agents, Australia

runs the risk of being exposed to growing rabbit impacts, which already cost Australian agriculture over \$200 million a year and impacts 322 nationally listed threatened species."

The new strategy – developed by a highly experienced group of scientists from New South Wales, South Australia, Victorian government agencies and CSIRO - also highlights the importance of better integration of biological control with conventional controls, as well as an increased focus on extension and adoption methods.

The strategy was reviewed by the CISS rabbit biocontrol steering committee, with members comprised of key investors and end-user stakeholders from AWI, MLA, DAFF/DCCEEW, land managers, National Farmers Federation

and Rabbit Free Australia

"Biological control has proved to be a very useful method of knocking down rabbit populations in Australia since the 1950s and this new strategy aims to ensure that this continues," said lan Evans, AWI Program Manager, Woolgrowing WHS & Vertebrate Pest Control.

"However, woolgrowers should rigorously apply best-practice integrated pest management when controlling invasive rabbits and not regard biocontrol as a 'silver bullet' solution. The timing and the sequence of rabbit control methods is also paramount."

More information: Access the new strategy on the CISS website at www.invasives.com.au www.wool.com/rabbits



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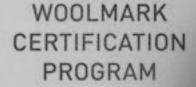
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During the past 60 years, more than six billion wool and wool care products have been certified for quality through the Woolmark Certification Program. There are now more than 600 Woolmark licensees across the world.

The Woolmark logo attached to a wool product provides customers with an assurance of quality for the product, thereby helping persuade shoppers to purchase it. In this way, the Woolmark Certification Program is helping to support and increase the demand for wool – see page 38 for details.



6 billion+

Certified Products

600+ Licensees

> 60 Years





AWI WORKING
TO INCREASE THE DEMAND
FOR AUSTRALIAN WOOL

The world famous Woolmark brand – owned by Australian woolgrowers – this year marks its 60th anniversary. The Woolmark logo's enduring appeal continues to deliver significant returns to Australian woolgrowers through its use in the Woolmark Certification Program as well as marketing campaigns.



Established in 1964, the iconic Woolmark logo was introduced to help consumers easily identify superior woollen garments during a time when synthetic fibres were flooding the market in the post-war period.

The value of the brand quickly became established and highly regarded across the world in the apparel, interior textiles and home laundry sectors. When attached to a product, such as on a sewn-in label or a swing ticket, the logo provides customers with an assurance of quality for the product, thereby also helping to strengthen the demand for wool.

During the past 60 years, more than six billion wool and wool care products have been certified for quality through the Woolmark Certification Program. There are now more than 600 Woolmark licensees across the world, with some having been with the Woolmark Certification Program throughout the past 60 years, including Zegna of Italy and Sportscraft of Australia.

During its illustrious history, the Woolmark brand has forged iconic partnerships with some of the world's most renowned brands. From international icons like Benetton and Prada, to Australia's homegrown brands like Country Road and R.M. Williams, plus sporting giants like Manchester United and Andy Murray, the Woolmark logo has graced products across the fashion and textile spectrum.

The Woolmark Company has also pushed the boundaries of innovation with wool. Examples, amongst many, include reinventing the suit with BOSS, using wool for the summer season with JACQUEMUS, showcasing the performance properties of the fibre with adidas at the Boston Marathon, and creating a water and wind resistant fabric with Nanshan. The company has also found new categories for wool, such as footwear with Levi's and swimwear with arena.

Additionally, the company's unwavering commitment to nurturing young talent is evident through its numerous support programs such as the International Woolmark













For the past 60 years, the Woolmark brand's promotions have raised the profile of wool amongst consumers and along the supply chain.

"The Woolmark logo has proved to be a great asset for promoting wool during the past 60 years – and continues to provide solid value in building awareness of the benefits of Australian wool and supporting demand for the fibre."

John Roberts, AWI CEO

Prize, Woolmark Performance Challenge, and the Woolmark Learning Centre. These initiatives not only advance wool technology but also inspire the next generation of designers and industry leaders.

And as people become more focussed on the impact of products on the planet, The Woolmark Company has evolved to meet market requirements, partnering with farmers and the textile supply chain to ensure that wool – already a natural biodegradable and renewable fibre – continues to be the perfect choice for those seeking products that has a minimal impact on the environment.

Sixty years after the launch of the Woolmark logo, Australian woolgrowers continue to benefit from its use by AWI subsidiary The Woolmark Company to promote wool globally.

"As we mark this 60-year milestone, we remain committed to the core values of the Woolmark brand – quality, innovation and respect for the environment which are very much aligned to the desires of contemporary consumers looking for a new idea of luxury which is both authentic and eco-conscious," said AWI CEO John Roberts.

"Our network of offices in key markets across the world use the Woolmark brand to promote these core values that represent Australian wool, for the benefit of Australian woolgrowers who own the iconic logo."

More information: www.woolmark.com

WOOLMARK LICENSEES BACK OUR WOOL IN CHINA

Chinese companies certified to use the Woolmark brand and other wool industry partners recently gathered in Shanghai to learn more about the opportunities for Australian wool in the region and thereby increase sales of their wool products.



With about a quarter of Woolmark licensees being Chinese companies, The Woolmark Company in China each year brings together its Woolmark licensees and other partners to attend a one-day Woolmark Licensee Seminar. This year, being the 60th anniversary of the Woolmark brand, the event had special significance.

Held on 26 July, more than 150 quests from the Chinese-Australian wool industry gathered to celebrate the rich legacy of the Woolmark brand and its vision for the future. Attendees included executives from leading enterprises, brands, and e-commerce platforms; government officials; academic experts; and Australian woolgrowers.

The event highlighted the ever-increasing opportunities in wool textile innovation, marketing and sustainable development

in China, and provided the opportunity for companies across the supply chain to communicate and cooperate together.

"During the past 60 years, the Woolmark logo has become one of the world's most renowned textile symbols, representing innovation across the entire supply chain from farm to retail. AWI and The Woolmark Company remain committed to increasing global recognition of wool's premium, natural qualities," AWI CEO John Roberts said in his opening remarks to the seminar.

"We've also witnessed during this time, the growth of China's textile industry and the high level of investment that it continues to put into wool. We look forward to further good relations and cooperation between the Australian and Chinese wool industries."

Minister-Counsellor (Agriculture) at the Australian Embassy Beijing, Deb Langford, said at the seminar: "Australia and China share a long history of collaboration in the wool industry, which has boosted both economies and facilitated cultural exchange. Looking ahead, we hope to deepen our collaboration and forge the path to sustainable development together.'

Woolgrower Tom Murray of Trilby Station at Louth, NSW, gave a presentation in which he shared the experience of wool-growing in Australia and highlighted woolgrowers' commitment to sustainability.

President of China Wool Textile Association, Liu Jiaqiang, provided an overview of the wool industry in China and its prospects for the future. AWI Country Manager for China, Jeff Ma, outlined the business landscape of The Woolmark Company in China, showcasing the potential of wool in the Chinese market. Some of the insights from other guest speakers who addressed the seminar included:

Opportunities for wool in the apparel industry:

Zhan Yan, manager of womenswear at China's largest e-commerce platform TMALL, said wool product sales on e-commerce platforms have been increasing annually. More brands are expected to launch wool products to meet the demand for high-quality, personalised and sustainable fashion.

Design trends in the business attire market:

Dr Cao Xiaojie from Dong Hua University emphasised the crucial role of wool in business attire. She believes that wool clothing will blend style with technological advancements, making business attire more comfortable, versatile, functional, stylish and eco-friendly.

Wool in China's outdoor sports market:

Xue Fei, general manager of outdoor sports at wool brand [SN], highlighted the growing demand for high-quality outdoor gear and how wool can increase its market share due to the fibre offering superior comfort and protection.



Woolmark licensees and other partners at the 60th anniversary seminar in China.

CHINA IS A MAJOR MARKET FOR AUSTRALIAN WOOL

The China we know today is not the China of 60 years ago, or 30 years ago, or even just 10 years ago. With 1.4 billion people driving a new consumer culture and an economy currently growing at 5% per year, today it seems the only constant in China is change.

But one thing that has endured is the country's vast appetite and passion for Australian Merino wool and its deeply committed relationship

with Australian woolgrowers. Today, China is Australia's largest customer, buying about 85% of its total wool exports. Exports to China have risen markedly since 1980, from 21 million kilograms (mkg) greasy to 268 mkg in 2022/23.

Over the past few decades, China's wool textile industry has made remarkable progress and has become the world's largest wool processing and exporting country. It

has made major breakthroughs in scale, technology and innovation.

Once a manufacturing hub, China in recent years has also fast become a large consumer of premium wool apparel. The finished high-end wool garments that were previously only made for export have found a domestic market thanks to the rise of middle income earners and their maturing tastes.

ICICLE WOOL COLLECTION TRACEABLE TO THE FARM

AWI has once again joined forces with leading Chinese eco-luxury brand ICICLE, this year unveiling a traceable Merino wool collection for Autumn/Winter 2024.

ounded in 1997, ICICLE is firmly established as one of China's leading eco-luxury brands. ICICLE has adopted 'Made in Earth' as its brand philosophy and uses only high-quality natural fabrics from which it crafts elegant and contemporary garments for men and women.

During the past decade, AWI's marketing arm The Woolmark Company has built a strong relationship with the brand, which is a Woolmark licensee, and the release in July of the brand's inaugural traceable wool collection is a natural extension of this long-term collaboration.

The Autumn/Winter 2024 collection includes two core traceable ranges: the 'Superfine Merino Wool Collection' made from 13.75 micron wool and the 'Dew Wool Collection' using 17.5 micron wool.

Both collections embody a commitment to traceability with each garment featuring a QR code that, when scanned, provides details for customers of the origin of the wool in Australia and the supply chain it travelled. Customers can explore the wool-growing farms, the wool processing plants and the design concepts behind the product.

AWI CEO John Roberts says there has been a steady increase in demand by Chinese consumers for premium and sustainable products, which means it is vital that AWI and The Woolmark Company continue to partner with luxury brands such as ICICLE to build the use of Australian Merino wool in their collections.

"Partnerships such as this are important for Australian woolgrowers because they not only promote the benefits of Merino wool, but also showcase the eco-credentials of the fibre,"

"With this new traceable wool collection, ICICLE features the actual Australian farms from which the wool in the collection is sourced. It provides a very strong marketing message. ICICLE is able showcase the farms' strong commitment to quality, responsible wool production and environmental sustainability to its discerning consumers in China.

"There has been an emergence of sustainable fashion and consumption in China in recent years, with consumers increasingly interested in the provenance of products. Traceability and transparency help safeguard the global reputation of Australian wool for quality and environmental sustainability."

The traceable Superfine Merino Wool Collection comprises a dozen knitwear pieces which combine incredible fineness with longevity. Carefully curated from select Australian Merino wool, the fibre has an average diameter of 13.75 microns, providing a delicate tactile sensation comparable to

cashmere with unparalleled lightness and

comfort in all seasons.

The wool in this collection is sourced from 'Mulgowan' in the Traprock region of Queensland, owned and run by Clive and Margaret Smith. The ultrafine fibres are crafted into yarn exclusively for ICICLE by Südwolle Group. The yarn has a lustrous texture and is machine washable.

The traceable Dew Wool Collection features outerwear pieces such as a trench coat, jacket, and down coat for everyday commuting or more adventurous travel. It uses the exclusive 'Dew' fabric supplied by Dino Filarte, the premium brand from Nanshan Fashion Sci-Tech Co, Ltd. In the collection, 17.5 micron wool is combined with silk using OPTIM™ technology in a chemical-free process to create the naturally water and wind resistant fabric with luxurious, voluminous texture



Back to the source: Co-founder and CEO of Chinese brand ICICLE, Mr Ye Shouzen, visiting the Elsom family's 'Old Ripponhurst' wool-growing property in Victoria, pictured holding coats made from wool sourced from the same farm.



From farm to fashion, back to farm: Knitwear from the ICICLE's traceable Superfine Merino Wool Collection in a promotional photo at 'Mulgowan', the wool-growing property from where the fibre in the knitwear was sourced.

while also being lightweight, breathable and machine washable

The Dew Wool Collection can be traced back to select Australian properties including 'Old Ripponhurst' at Warrabkook in the Western District of Victoria, owned and run by David and Michelle Elsom with their daughters, Grace and Emily - see box below.

Co-founder and CEO of ICICLE, Mr Ye Shouzeng, said, "This project perfectly illustrates our unending search for the finest raw materials produced in the most responsible way.

"It has also inspired us to offer the first ICICLE Natural Way Award to both farms. This new global award recognises exceptional effort in the preservation of the environment through innovation ... endorsing our founding ethos 'a natural way of creating, a natural way of producing, a natural way of living'."

The collection is available to purchase online and at ICICLE stores, which are located in China and France.

More information: www.icicle.com.cn



Garments from the ICICLE's traceable Dew Wool Collection in a promotional photo by ICICLE.

AWARDS PRESENTED AT 'OLD RIPPONHURST', WARRABKOOK, VICTORIA



Emily, Grace, Michelle and David Elsom receiving ICICLE's Natural Way Award from Co-founder and CEO of ICICLE, Mr Ye Shouzeng.

he Elsoms, who supply wool used in ICICLE's traceable Dew Wool Collection, run a mixed farming business comprising 4,500 sheep and 500 breeding cattle. The sheep enterprise includes a self-replacing Merino flock cutting an average of 5.5-6 kg of 16-18 micron wool. They annually produce 150-160 bales each year that is all sold at auction.

The Elsom family looks after their 850 hectares of land by rotating stock depending on the ground cover and not overgrazing near the waterways. They also plant shelter belts, which provide shade and wind breaks for their livestock. The Elsoms consider there is a good future for Australian Merino wool, due to the fibre being versatile enough to be used in different types of garments and the emergence of new markets for the fibre.

The Elsom family were the winners of this year's Nanshan Wool Supremacy Award which is presented each year for the wool purchased by Nanshan that has the highest possible

processing ability and quality. The Elsoms' winning 27 bales of wool was selected from a pool of 1,102 farms that supplied ten bales or more to Nanshan.

In June, Nanshan and ICICLE representatives travelled to Australia to visit the Elsom family's wool-growing property and present them with the Nanshan Wool Supremacy Award and also an ICICLE Natural Way Award

which honours the exploration of a more advanced harmony between man and nature.

"These two awards showcase ICICLE and Nanshan's ongoing support and appreciation for Australian woolgrowers. It is a clear indicator of the strong relationship that exists in our iconic wool industry between Australia and China," said AWI CEO John Roberts.



Some of the Elsoms' Merinos on their 'Old Ripponhurst' property in Victoria.

With a population of more than 50 million people, an economy ranked thirteenth in the world, and the primary driver of customers' apparel purchases being quality, South Korea is a key consumer market for products made from Australian wool. Below are two examples of recent marketing initiatives in the country.

MARKETING COLLABORATION WITH KOREAN ONLINE RETAIL GIANT

CAMPAIGN HIGHLIGHTS

350,000

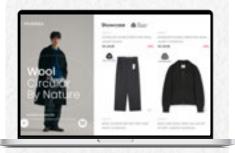
wool products promoted (+ 338 YoY)

120 tons

wool sold (+ 264% YoY)

A\$61.7 million

net sales (+ 360% YoY)



After a postive marketing collaboration in 2022 with Korea's leading e-commerce fashion platform, Musinsa, The Woolmark Company last year ran a second, larger and even more successful campaign with the retail giant.

More than three times the number of wool products were promoted in the most recent campaign, resulting in it being The Woolmark Company's largest ever collaborative autumn/ winter campaign in the Korean market. There were approximately 350,000 wool items available to buy from 87 participating brands, representing an estimated 120 tons of wool.

Launched in October 2023, the extensive digital and social campaign boosted sales of a diverse selection of contemporary wool products across menswear and womenswear. There were an estimated net sales worth A\$61.7 million across the campaign sales period, which is an increase of 360% from the previous year.

"We were pleased to continue our collaboration into 2023 following the successful results achieved in 2022. This has had a positive impact on Musinsa's sales performance, for which we are grateful for this collaboration," said Mr Heesun Yu, Manager at Musinsa.

South Korea ranks as the fifth largest e-commerce market in the world – and fashion is the largest segment, accounting for 27% of sales. Post-pandemic, online shopping continues to increase, making The Woolmark Company's collaboration with Musinsa a strategic priority.

Products could be purchased via a special wool hub page on Musinsa's e-commerce website. A 12-minute 'unboxing' style documentary that promoted the benefits of wool and the wool products was also produced by Musinsa and released on its YouTube channel. Outdoor digital advertising in central Seoul and a pop-up store complemented the campaign.

As well as showcasing the premium benefits of wool, the 'Circular by Nature' environmental credentials of wool were central to the campaign.

While the objective of the collaboration was primarily to drive sales of Merino wool in the autumn/winter 2023/24 season, working with Musinsa also increased The Woolmark Company's brand image which could potentially encourage numerous brands on the platform to develop further Merino wool products for future collections.

DEFENDING THE SUITING MARKET IN KOREA

The Woolmark Company has provided support for an instore and online marketing campaign by Brentwood, a Korean formal menswear brand established in 1989. About 60,000 pieces were available to buy, representing an estimated 30 tons of wool.

Brentwood has been owned since 2009 by Korea's fifth largest apparel group Kolon Industries which had annual sales worth A\$6 billion in 2022. The new spring/summer campaign with Brentwood, which launched in February this year, follows on from a joint marketing campaign held last winter with Cambridge Members, which is another suiting brand owned by Kolon Industries.

Although the men's suit market in Korea has faced downward pressure from the casualisation

of apparel for a number of years, net sales in the men's suiting market increased to about \$5.23 billion in 2022, a rise of 6.1% from the previous year, as the COVID pandemic ended.

Through close work with Brentwood, The Woolmark Company provided 'in kind' support to ensure that Merino wool – which Brentwood has never actively advertised before – has become a core theme of the brand's marketing going forward. Core messaging focusses on the fibre's excellent breathability and comfort, even in summer, with remarkable wrinkle recovery and freedom of movement.

As well as digital and social media marketing, point-of-purchase displays promoting the wool products were on show at Brentwood's 140 stores across the country.

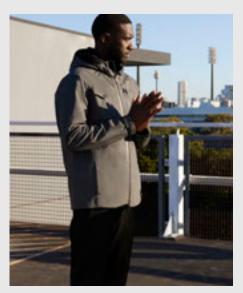


The Woolmark Company is now liaising with both Brentwood and Cambridge Members on a project for this year's autumn/winter season to ensure there is large scale promotion of Merino wool to affluent consumers in Korea.

two.one

NEW HIGH PERFORMANCE JACKETS FROM TWO.ONE

Australian clothing company Farage has launched a new high performance outdoor brand, Two.one, that has a range of Woolmark-certified Merino wool jackets made with an innovative 'Woven Shield' fabric.





The 2.1 Woven Shield Merino Wool Rain Jacket and detail showing its water resistance.

Performance meets style in a new range of Merino wool jackets launched by Two.one (pronounced two point one), a technical sports outdoor brand inspired by tailored style with a modern urban feel. The new brand is the creation of clothing company Farage, which has offered luxury tailored suiting with a modern twist for the past 25 years.



The 2.1 Woven Shield Merino Wool Field Jacket (left) and Blazer (right).

Having worked with wool as a core fibre for Farage, it is no surprise that the new brand's founder, Joe Farage, and co-founder Quentin Hart, turned to wool for its performance qualities when designing for Two.one.

"Australian wool has always been our greatest fibre to work with and has been at the core of our brand DNA since 1998. Whether it's our defence projects or our new technical brand Two.one, we always choose wool as our first choice." Joe said.

Two.one's collection includes three Woolmark-certified hero pieces – a Field Jacket, Rain Jacket and Blazer – all created using Two.one's proprietary 'Woven Shield' fabric, a 100% Merino wool fabric bonded with high-end Japanese technical backing to create a beautiful yet functional 3-layer technical fabric. The three high performance jackets are wind and water resistant, keeping the wearer dry and comfortable while remaining stylish and presentable.

As well as sourcing high-quality materials, Two.one products emphasise attention to detail, both inside and out, to deliver an aesthetic that embodies youthful confidence and refined adult sophistication.

Available now, the collection will also be presented at the ISPO Outdoor Sports trade show in Munich in December.

Two.one brand launch

The Two.one brand was launched in July at an event in Sydney, supported by The Woolmark Company, comprising an eyecatching high-wire vertical runway featuring aerialists, and a fashion show that saw Sydney Swans players Justin McInerney, Logan McDonald and Will Hayward don Two.one jackets on the main runway.

"It is great to see an Australian brand celebrating Australian Merino wool across multiple categories. From tailoring to performance outerwear, Merino wool has the technical benefits to ensure maximum comfort in all scenarios", said AWI CEO John Roberts.

"Farage is proud to be a long-term licensee of Woolmark as we continue to grow this partnership well into the future."

> Joe Farage, Farage and Two.one co-founder

"We are proud to continue our long-standing relationship with Farage and now, Two.one, as they continue to spotlight this amazing fibre."

Farage was founded in Sydney in 1998 by Joe and his wife Katy, producing sophisticated and modern tailoring, with a focus on heritage, provenance and authenticity. The brand has gained a reputation for its quality and craftsmanship and continues to attract a growing number of loyal customers from across Australia.

Farage has its flagship store on Sydney's prestigious Martin Place, although most of its retail sales are online.

Uniforms are an important part of the Farage business. Farage designs and produces uniforms for large and small companies. It supplies Woolmark-certified General Duty garments to all three branches of the Australian Defence Force: the Royal Australian Navy, Australian Army and the Royal Australian Air Force. The brand is also the official tailor to the Sydney Swans AFL team and has recently renewed its partnership with the Swans for another four seasons.

More information: www.twopointone.com.au AWI presents commercially available wool garments at the fashion shows of regional events across Australia, to help showcase the fibre and build demand for the wool products.

Showcasing the latest wool apparel of some of Australia's greatest brands and retailers, the AWI Runway Kit was launched 12 years ago and has been on tour across Australia ever since.

The curated collection of garments assists the organisers of regional shows to showcase great examples of wearable wool fashion at their events. The collection includes commercially available wool outfits from some of AWI's retail and design partners.

The current AWI Runway Kit contains looks from the Autumn/Winter 2024 collections of leading brands Zara, Country Road, Iris & Wool, SABA, Seed Heritage, Uniqlo, Marcs and AERE.

Recent shows at which the AWI Runway Kit has been exhibited include Darkan Sheepfest, WA (February), SA Stud Merino Expo, Burra SA (February), Wagin Woolorama, WA (March), Karoonda Farm Fair & Show, SA (April), Queensland State Sheep Show, Blackall (May), Campbell Town Show, Tas (June), and the Australian Sheep & Wool Show, Bendigo Vic (July).

Campbell Town Show

Fashion director of the Campbell Town Show, Taylor Clyne Smith, says she is grateful to AWI for supplying the luxury garments, which are paraded on the fashion show's catwalk lined with fleece.

"AWI gives us the opportunity to showcase wool quite literally from producer to parade, with the audience seeing both the raw wool straight off a sheep's back and then a wide variety of garments made from the fibre," she said.

"My goal is to make people feel connected to our woolgrowers while soaking in the collections showcased on this premium Tasmanian catwalk.

"At this year's fashion show I not only talked about the garments but also provided the audience with an insight into woolgrowers' day to day, to help them really understand and appreciate growers' premium product.

"We delved into the life of fifth generation woolgrower Bruce Dunbabin of Mayfield Estate,



Garments from the AWI Runway Kit being showcased to the crowds at the Campbell Town show in June. Pictured is the best selling 100% wool Poppy Dress from Iris & Wool (above) and the 100% wool Neptune felted skirt from Marcs paired with a 100% wool jumper from Uniqlo (right). The header image shows the crowd at the Campbell Town Show fashion parade viewing a wedding gown made out of Merino wool supplied by Waverley Mills.

PHOTOS: PICTURE HAUS

whose superfine Merino wool sells predominately to the Italian market. During his tenure, Bruce has had contracts with superfine fabric producers Reda and Vitale Barberis Canonico who sell to the likes of Amarni and Hugo Boss.

"I spoke about how Bruce describes the ebbs and flows that producers find themselves in and wool being a real confidence product. "It's a beautiful product, a hearty and luxurious product that people typically need cashflow to purchase," Bruce explained. It's been really tough coming off the back of 22/23, which were some of our best years on record, to now having no rainfall or grass growth."

"It's a hard time to be a farmer, but Bruce's advice is to hang on tight.

"Tassie wool is sought after across the globe, it's a safe product and we have premium producers.

"I told this story to the audience because I believe it's important to think about this as they revel in the catwalk display, where wool and woollen products are front and centre."

The AWI Runway Kit is available for loan to suitable wool-focused events across regional Australia – it is contained in a robust wardrobe case for ease of storage and transport.



More information:

Enquiries from event organisers interested in borrowing the AWI Runway Kit should be directed to AWI Events Project Manager Vanessa Peyton at vanessa.peyton@wool.com.

WAVERLEY MILLS CELEBRATES 150 YEARS

Founded in 1874, Waverley Mills is Australia's oldest continuously operating textile mill, but after recent investment in the mill's infrastructure it has its eyes firmly fixed on the future with plans to increase production.

or 150 years, Waverley Mills has been or 150 years, waveres, the banks of Distillery Creek in Launceston, Tasmania – proudly spinning, weaving and finishing all its textiles onsite.

In its early years, the mill produced tweed, felted cloth, shirting and flannel; but it was blankets that made Waverley famous. The company once boasted 80% of the Australian blanket market and employed more than 300 people. It supplied blankets to the likes of the Australian Army and Qantas.

During its history, Waverley has faced difficult moments and had to be resilient when faced with the growth in synthetic fibres, reductions in import tariffs, and the ascendancy of doonas in preference to blankets. But, while many Australian manufacturers went out of business, or were forced offshore, Waverley survived with its innovation and commitment to quality still burning bright, albeit with a much reduced production and workforce

Investment for the future

Today, Waverley Mills, with its 31 employees, is on the up again. The company has invested nearly \$10 million in upgrading the mill and buying new machinery. While more than \$6 million was from government grants, the remainder has been from private investors who see the big potential of the business. Its manufacturing facilities now include a blend of state-of-the-art modern textile technology alongside its historic 60-year-old looms.

Under the leadership, since December 2022, of Managing Director Dave Giles-Kaye, who is the former CEO of the Australian Fashion Council, Waverley Mills aims to grow its business at a sustainable pace.

As well as attracting loyal and new consumers, the company has recently been working collaboratively with brands such as Country Road, R.M.Williams, Woolerina and Nudie Jeans, and has a new contract with Spirit of Tasmania ferries.

Focus on natural fibre products

Waverley is committed to manufacturing products made from natural fibres, with Australian Merino wool being the hero. The company expects to process about 35 tons of wool this year, equivalent to about 35,000



The Waverley Mills Collector's Edition 150th Anniversary Throw, crafted from 18-micron Merino wool.

blankets, which is a threefold increase from just a few years ago. The company has ambitions for further growth; within a decade, it plans to be processing about 120 tons annually.

Due to the company's expansion, Waverley Mills rejoined the Woolmark Certification Program in December last year, appreciating the value of using the logo as an independent mark of quality for its customers.

The company's product range currently includes 100% Australian Merino wool blankets, throws, travel rugs and picnic rugs, scarves and shawls, ranging in micron from 18 micron for its newly launched Collector's Edition to 29 micron for its picnic rugs.

The company also produces its popular recycled wool products; throws, blankets and pet blankets made from a blend of 70% Australian new wool and 30% recycled wool. Pure wool offcuts and ends are shredded, spun, and blended with Australian wool of 29 micron to make the recycled yarn.

In the future, Waverley also has aims to introduce apparel such as shirts and jackets into its product range, and the company is

also looking to introduce its iconic brand into overseas markets.

Traceability and sustainability

Traceability and partnering with Tasmanian woolgrowers is becoming a bigger focus for the business. The newly launched Collector's Edition is sourced from Julian and Annabel von Bibra's 'Beaufront' property at Ross in Tasmania.

The company is positioned well to capitalise on the consumer trend towards sustainability. As well as its use of only natural fibres, the company's carbon footprint is relatively small because all production takes place on its own premises, aside from the wool's scouring. The company also has its own renewable electricity supply.

The recent investment in the business, alongside a commitment to crafting beautiful, sustainable textiles, has created a tangible air of excitement in the business.

More information:

www.waverlevmills.com

The Woolmark Company is flying the flag for Australian woolgrowers in India, one of the most important importers of Australian wool and now the most populous country in the world. Read on for a snapshot of some recent activities undertaken there.

As the second largest importer of Australian greasy wool by volume, India is an important market for our fibre. Its economy is the fifth largest in the world and is growing at seven percent per annum.

The Woolmark Company first opened its Indian office in 1966 and has operated continuously in the country for nearly 60 years, playing a part in India's journey from a manufacturing hub to a consumer market as well. The India office now also operates in Bangladesh and Sri Lanka.

Today, The Woolmark Company works with more than 100 supply chain partners in all stages of the wool supply chain, from earlystage processors, spinners, weavers and knitters through to garment makers, brands and retailers. The company also works with exporters, education institutions, designers and trade bodies.

As the world's third largest exporter of textiles and apparel, India is well-known for its premium textile manufacturing. The country also has a strong base of handloom and craft artisans, and natural dyeing techniques. Its textile industry has an annual growth rate of about five percent and is the country's second largest employer with 54 million people directly employed in the industry. Overall, there are 3,400 textile mills.

India has the second highest number of Woolmark supply chain licensees in the world which is a testament to the ongoing quality and capacity of wool products manufactured there.

About 40-50% of wool processed in India is

consumed domestically. The domestic Indian apparel market is worth about A\$150 billion and is growing at a rate of nine percent per annum. India is increasingly becoming a market of interest for premium brands. Indian consumers like high-quality products with great brand value, which provides a positive future for Merino wool and Woolmark-certified products.

The Woolmark Company's work in India includes consumer marketing, trade engagement, product innovation, and education – all with the aim of ensuring Australian wool's ongoing place in the country's thriving textile industry and growing premium consumer market. This double page spread includes some examples of this work. Similar activities are undertaken by the other The Woolmark Company offices across the world.

JOINT CONSUMER MARKETING CAMPAIGNS



Activewear brand Athlos

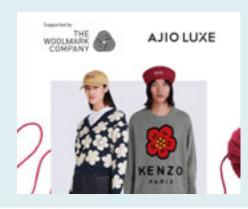
Athlos is an activewear brand with a focus on innovative fabrics and fabric technology. It is a very popular brand among the fitness communities in India. The purpose of The Woolmark Company's marketing campaign with Athlos was to demonstrate the performance benefits of Merino wool for activewear and its suitability for India's hot climate.

A lightweight, circular knit collection was created with The Woolmark Company's support and launched by the brand in a campaign named 'Merino for Tropics'. Such was the success of the campaign that Athlos decided to continue to use Merino wool in its core collection and expand its range of Merino wool products.

Leading luxury e-retailer Ajio Luxe

The Woolmark Company in November 2023 launched its first marketing campaign with Ajio Luxe, India's largest luxury e-retailer which has one million daily active users and huge customer growth. The aim of the 2½ month campaign was to build awareness for Merino wool among young luxury shoppers and increase demand for Merino wool products being sold by 50 participating brands.

As a result of the campaign, Ajio Luxe achieved a 61% increase in sales of wool products by value, well above the target of 22%. The total impressions for the campaign (the number of times that the campaign was seen) was more than 50 million.



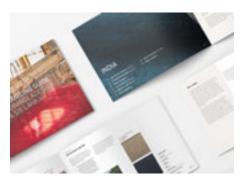


Luxury menswear brand Andamen

Homegrown premium brand Andamen was inspired by seminars and presentations with The Woolmark Company team to introduce an extrafine Merino wool collection into its product range for the first time, as their topmost line called Apex. The collection was developed through a Woolmark-certified supply chain using Australian Merino wool.

The collection comprises 30 styles of jumpers, polo shirts and other tops for men and was marketed through a digital and social media campaign. The highlight of the campaign was the video of the founder talking about the collection. The brand is now working on further Merino wool collections.

TRADE MARKETING AND EDUCATION



Guide to sourcing wool products in India

The Woolmark Company has created a sourcing guide that highlights key information and contact details of the best wool spinners, weavers, knitters and specialist suppliers on the Indian subcontinent. This unique resource (pictured above) helps brands and designers from across the world to connect with the Indian region's leading suppliers of premium yarns and fabrics made from Australian Merino wool, thereby increasing demand for the fibre.

Trade shows

The Woolmark Company participates in the major trade shows of the region to promote Australian wool and make supply chain connections. They provide an important source of leads for business development as well as the opportunity to support our trade partners. Recent shows have included Fiber and Yarns in Mumbai and Lakme Fashion Week. In February. The Woolmark Company collaborated with Austrade at Bharat Tex in New Delhi with the message 'Grown in Australia. Made in India' celebrating the connection between the Australian wool industry and the Indian supply chain.

Retail training and trade workshops

The Woolmark Company regularly conducts retail training and trade workshops with big brand and suppliers of this region. Many participants from these programs have also completed online courses in the Woolmark Learning Centre.

The Wool Lab sourcing guide

Yarn and fabric manufacturers in the country have had swatches of their products included in The Wool Lab sourcing guide (see pages 54-55), generating domestic and international business for them. Equally, The Wool Lab has been an important tool for The Woolmark Company to build its relationship with the supply chain and brand partners because of the company's continuous involvement with them for sourcing and presentations.

PRODUCT INNOVATION



Product development

The Woolmark Company in the India region carries out product development on a wide range of products with its supply chain partners including spinners, weavers, knitters and natural dyers. For these partners, wool is very

important and they help in supporting projects through in-kind support such as providing tops or yarn or enabling the company to use their facilities to carry out R&D activity. Products in which R&D activity is happening includes activewear, footwear and wool/cotton blended yarns with a high wool content.

Capacity building in Tirupur

In 2017, The Woolmark Company began educating manufacturers in the city of Tirupur, the knitwear capital of India, about wool and how to manufacture products with the fibre. Tirupur is the hub of circular knitting with more than 6,000 circular knitters that mainly work with cotton. Overseas and domestic brands source their fine knit products from this region. There was not a single wool knitter in this

region prior to 2016. However, 500+ knitters have now been educated about wool technology with many knitters having successfully taken part in wool knitting and finishing trials. Circular knitted wool products are now being commercially produced in Tirupur catering to dozens of domestic and international brands.

Natural dyeing of wool

Natural dyeing is an eco-colouration technology which is very much on trend. It complements the wool fibre's own eco-credentials. The Woolmark Company has been working with partners to develop an advanced process for colour fastness at many stages of production, such as tops, yarns, fabric, garments and shoe uppers. Indian designers and brands have now used natural dyes in their wool products.

STUDENT EDUCATION



Educating tertiary students

The Woolmark Company has strong relationships with the premium design and technical institutes of India, with the company regularly running educational programs about Australian wool to their fashion and textile students. Without The Woolmark Company's activities, students in India would receive very little education about wool because their curriculum is primarily focused on cotton and synthetic fibres. The Woolmark Company has also been successful at promoting the online courses in the Woolmark Learning Centre.

Naturally Inspiring seminars

The Woolmark Company holds Naturally Inspiring seminars to give students the chance to learn about the natural benefits and versatility of Merino wool and the variety of ways to work with the fibre. The most recent seminar was held in April in Delhi for 140 tertiary textile and fashion students and teachers (pictured left). The seminars also provide the students with an insight into working in the fashion, textile and retail industries from industry speakers.

Wool Science program

For the past four years, The Woolmark Company has run wool science and technology courses for textile engineering students at five technical institutes in India. The courses are now taught by the institute's own faculties, with The Woolmark Company providing them with learning, teaching, and examination materials.

Performance Challenge

There are many colleges in India enrolled in the Woolmark Performance Challenge, a competition for tertiary students across the world to develop innovative new product applications for Merino wool within the sports and outdoor market. Indian students have been successful in the competition with a finalist in 2022 (Ayush Verma) and a winner in 2023 (Harleen Kaun)

INNOVATIVE HYBRID WOOL YARN A RUNAWAY WINNER

One of the most popular sportswear brands in Japan, Goldwin, has launched a range of Woolmark-certified T-shirts made from an innovative wool blend yarn from leading Japanese spinner Nikke, with support from The Woolmark Company.

 W^{ith} the aim to foster the use of Merino wool sporting apparel by runners in Japan, The Woolmark Company launched a joint marketing campaign in March with the Goldwin sportswear brand for a range of its new T-shirts made using Nikke's AXIO® wool blend yarn.

Established in Japan in 1951, the Goldwin brand sells apparel for running, trekking, skiing and lifestyle markets. The brand is part of Goldwin Inc, the fourth largest sports group in Japan that has annual sales worth A\$1.1 billion.

The marketing campaign focussed on raising consumer awareness of Merino wool in sports, with a focus on trail running, as well as driving sales of the new Goldwin wool-rich T-shirts. The digital campaign drove online customers to a dedicated campaign landing page on Goldwin's website where they can purchase the apparel. The campaign also included videos, social media, promotional e-newsletters to Goldwin's client base, and advertorials on third party running blogs.

The campaign also promoted the T-shirts at the Ultra Trail Mount Fuji event in April to raise awareness of the benefits of Merino wool apparel amongst the thousands of highly motivated event participants who regularly buy trail running gear.

The project supported the first ever collaboration between Goldwin and Japan's largest wool spinner Nikke, a long standing Woolmark licensee that consumes 2,300 tons of Australian Merino wool each year (see the article about Nikke in the June edition of Beyond the Bale). Established in 1896, Nikke has recently been expanding its wool yarn business in the sports and outdoor category through the company's innovative AXIO® wool blend yarn.



Goldwin's T-shirts, made from Nikke's AXIO® wool blend yarn, that have the hand feel of pure wool.

What is Nikke's AXIO® wool blend yarn?

Conventional wool-polyester blend yarns wrap the polyester fibres around the outside of the wool fibre bundle, but Nikke's AXIO® yarn has a new spiral-structured polyester fibre wrapped inside the wool fibre bundle - see diagram below.

Because the wool is exposed on the surface of the yarn, AXIO® retains the exceptionally soft texture and feel of pure wool when touching the skin. It also has all the other benefits of wool, such as the ability to reduce post-exercise chill, absorb and release moisture, and resist odours.

Tomonori Yasuda, the head of the Nikke's factory at Gifu in northern Nagoya, says that while it has previously been possible to spin a core of polyester into a wool fibre bundle, the problem was that the wool and polyester easily became separated. However, AXIO® overcomes this problem.



Diagram of Nikke's AXIO® yarn with the wool on the outside.

"With this spiral structure, we took on a challenge no other maker had ever attempted before. The completed yarn has the advantages of both wool and synthetics, and thanks to the fibre structure, it has added stretch and antipilling benefits too," Mr Yasuda said.

Goldwin performance wear merchandiser Yuya Kobayashi says AXIO® yarn stands out compared to other wool-synthetic yarns.

"In recent years, hikers prefer base-layers made of Merino wool for its advantages like resistance to post-exercise chill and odours. Nikke's AXIO® has all these features of wool, plus it's moisture wicking and durable. Goldwin's T-shirts manufactured with AXIO® are a perfect base-layer for exercising in activities like running, trail running and trekking, or for everyday wear," Mr Kobayashi said.

Top trail runner backs Goldwin's hybrid wool T-shirts



Top trail runner **Dylan Bowman** from the USA, helped develop Goldwin's new T-shirts: "I use one almost every single day and it's my favourite piece."

The Goldwin wool blend T-shirts are a favourite for top athletes including worldclass trail runner and Goldwin ambassador Dylan Bowman from the USA, who has won the Ultra Trail Mount Fuji twice.

"I typically like using wool products in every environmental circumstance, whether it is hot, humid or cold. Wool is a unique material in that it help temperature regulation in all those circumstances," Dylan said.

"I love the AXIO® because it combines the best of natural and synthetic materials. On the hand and on the body, it feels like a high quality Merino wool shirt, possessing all the benefits of wool when it comes to ventilation and temperature regulation \dots It's the perfect running tee."

Such was the success of the project and the relationship between The Woolmark Company and Goldwin that the Japanese brand has already agreed to expand its AXIO® wool collection for the upcoming autumn/ winter season.

More information:

www.goldwin-global.com/asia/editorial/axio https://nikke-nny.co.jp/english

Representatives from Japanese textile manufacturer and Woolmark licensee Miyuki Keori visited Australia in May to see the on-farm source of Australian Merino wool and meet with some of its Australian menswear clients.



Mr Kaneko Kenichi, woolgrower Simon Cameron, Ms Tamami Yoshimura and M.J. Bale Founder and CEO Matt Jensen.

Counded in 1905 as a manufacturer of woven wool fabrics for kimonos, Miyuki Keori has evolved during the past 119 years to specialise in men's luxury textiles, mainly worsted wool fabrics. The company has spinning, weaving, finishing and garment making facilities, and produces about one million metres of finished wool fabric each year.

The Nagoya-based company has earned an international reputation for high-quality skills and craftsmanship. It is a Woolmark licensee and a trade partner of the International Woolmark Prize.

In May, Miyuki's Chief Of Staff Ms Tamami Yoshimura and master tailor Mr Kaneko Kenichi visited Australia to meet with several Miyuki clients, including Australian-owned gentleman's clothier M.J. Bale and lifestyle brand Charlton, plus AWI staff in Sydney.

"Receiving information from AWI and The Woolmark Company about the Australian wool industry is very useful for us because we don't have an agent or branch office in Australia," Mr Kenichi said.

"I think it is important for both the Australian wool industry and businesses like Miyuki that make and sell Australian wool products, that The Woolmark Company is not only involved in short-term marketing but also the long-term branding of wool. Long-term, we believe that we can secure wool's position in high-

value-added products through branding and traceability management because wool is highly competitive in this field.

"We understand that Australian woolgrowers have had some challenging times, due to price fluctuations and climate variability, so we very much want the wool industry as a whole to pick up and expand, because we need a stable supply of wool from Australia."

M.J. Bale

M.J. Bale, which was founded in 2009 and now has an 80-plus store network nationwide, uses Miyuki's wool suiting fabrics.

At a special event in May at its national flagship store at Martin Place in Sydney, M.J. Bale launched its Made in Japan program that offers customers the choice of ready-to-wear and made-to-measure coats, jacket and trousers. At the event, Mr Kenichi measured customers for tailored suits, all to be handsewn in Mr Kenichi's atelier in Hokkaido by a team of experienced tailors using Miyuki fabrics.



Master tailor **Mr Kaneko Kenichi** taking measurements, and orders, at M.J. Bale in Sydney.

Mr Kenichi and Ms Yoshimura later in their trip travelled with M.J. Bale Founder and CEO Matt Jensen to the northern Midlands of Tasmania to visit woolgrower Simon Cameron's 3,000 hectare 'Kingston' property that produces superfine Merino wool. M.J Bale has been working with Simon since 2015 on 'singlesource' suits, tuxedos, blazers made entirely from Kingston wool. M.J. Bale has also worked with Kingston on trials with sheep fed with asparagopsis seaweed supplements to reduce

the sheep's methane emissions.

"The Australian wool industry has a rich history of producing reliably high quality wool. At Japanese fashion schools, we learn that Australian wool, Merino wool, is unique," Mr Kenichi said.

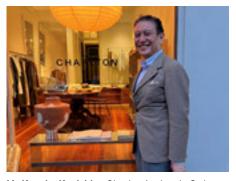
"Australia has an image in Japan of being a vast country that values nature and is highly attuned to environmental issues. We hope the industry continues its tradition of innovation to produce a next-generation wool fibre that has minimal impact on the environment."

Charlton

Whilst in Australia, the Miyuki representatives also met with Sydney-based lifestyle brand Charlton. Launched in 2018, Charlton sells functional menswear, including Australian Merino knitwear: T-shirts, shirts, long sleeved polo shirts and pullovers.

Guided by a passion for travel and adventure, the brand's garments are crafted in Japan using premium fibres like Australian Merino wool. Charlton will soon launch new wool products made using Miyuki fabrics, including jackets and trousers. Charlton was originally introduced to Miyuki by The Woolmark Company.

Charlton creative Henry Cousins also attended the Incubation Lab wool insights workshop held in Sydney in March by The Woolmark Company, in which participants were provided with valuable knowledge and resources to enhance their design capabilities with wool (as reported in June edition of *Beyond the Bale*).



Mr Kaneko Kenichi at Charlton's shop in Sydney.

More information:

www.miyukikeori.co.jp www.mjbale.com www.charltonstore.com

SUPERNATURAL RUNNERS STEP INTO THE LIMELIGHT

Circle Sportswear's Merino wool SuperNatural Runners, which embody both performance and sustainability, were officially launched in Paris in the lead up to the Olympics. They have a very special ambassador: three-time Olympic champion Marie-José Pérec, a French sporting legend who lit the cauldron at the Paris Olympics in July.



In a collaboration which positioned Australian Merino wool as the ultimate performance fibre ahead of and during the Olympic Games in Paris, The Woolmark Company supported French sports and lifestyle brand Circle Sportswear to launch its wool sneaker range in Paris in June. Founded in 2020, Circle Sportswear is a pioneering brand with a priority on minimising the environmental impact of its products.

The upper and the tongue of the SuperNatural

Runner are crafted from 65% Australian Merino wool blended with TENCEL™ (a fibre derived from wood pulp) for durability. In contrast to an upper with a *knitted* structure (as used in most running shoes), the SuperNatural Runner's upper is *woven*, which allows for extra toughness. The shoe is fitted with a 100% Merino wool lining, while the insole and laces are made from a Merino wool blend. The other parts of the shoe are also natural – including a midsole made from castor beans, and an outsole made from a tree rubber.

The new Woolmark-certified shoe not only harnesses the eco benefits of Merino wool, it also takes advantage of the fibre's natural performance benefits such as thermoregulation, moisture management, breathability and odour resistance.

"Our in-house technical team worked collaboratively on the development of the shoe's upper, helping to create this high-performance running shoe that aligns with the market trend towards sustainability. This is an example of how AWI is introducing the use of Merino wool in new markets to build demand for Australian wool," said AWI Regional Manager Western Europe, Damien Pommeret.

"The official launch of the SuperNatural Runners in Paris, and the wonderful support of high profile French Olympian and athletics legend Marie-José Pérec, generated great publicity and was perfectly timed as the world's gaze fell upon the Olympic Games."

More information:

www.circlesportswear.com

OLYMPIAN MARIE-JOSÉ PÉREC BACKS SUPERNATURAL RUNNERS



Marie-José Pérec wearing her SuperNatural Runners while carrying the Olympic torch when the torch relay visited the French overseas territory of Guadeloupe. PHOTO: Paris 2024 / Sydney-James Auguiac

Nicknamed 'La Gazelle' for her graceful running style, French sporting legend and three-time gold medallist at the Olympics, Marie-José Pérec, is one of the greatest sprinters in history. Her wins at Barcelona (1992) and Atlanta (1996) might be three decades ago, but she is still a big celebrity in France. To an international audience, she hit prominence again most recently when she lit the Olympic cauldron at the start of the Paris Olympics in July.

Marie-José is also an ambassador for Circle Sportswear, with which she shares an interest in the environment, and she is often seen wearing her SuperNatural Runners. Most prominently, she wore them during the Olympic Torch Relay in June when she delivered the torch to the French overseas territory of Guadeloupe in the Caribbean, where she was born 56 years ago. She also wore the them during her high profile running of the 10 km event of the Paris 2024 Mass Participation Marathon during the Olympics in August.

Always keen to promote the SuperNatural Runners, she talks during media interviews and posts on her Instagram about her running experience in the footwear and the natural performance benefits that the Merino wool provides.

"I am delighted to partner with Circle Sportswear, a brand that shares my values and commitment to a more planet-friendly sport," said Marie José Pérec. "Together, we are working to promote more sustainable running and to support the next generation of athletes."

"The SuperNatural Runner and the partnership with The Woolmark Company are part of this innovative approach that favours both performance and sustainability."

> Marie-José Pérec, three-time Olympic champion sprinter

NEXT GEN BEACHWEAR **EMBRACES MERINO WOOL**

Harnessing the unmatched performance of Merino wool, iconic Italian swimwear brand arena launched in May its inaugural collection of wool-rich beachwear for men and women, in partnership with The Woolmark Company. One of the collection's two ambassadors. Nicolò Martinenghi, won the gold medal in the 100m butterfly at the Paris Olympics in July.

With a presence in more than 100 countries across the world, arena is a huge international swimwear company with growing sales. The company was created in 1973 by sports visionary Horst Dassler (son of the adidas founder Adi Dassler and nephew of Puma founder Rudolf Dassler), and has been famous throughout its history for its performance swimwear and sponsoring elite athletes from Mark Spitz to Shane Gould.

This year, arena has added to its core swimwear offering the company's first lifestyle collection, the Spring/Summer 2024 Beachwear Collection, which includes Merino wool swimwear for men and, for the first time, women. The two products for men and three products for women feature sophisticated and contemporary styles combined with elegant colour choices. All the products all designed in Italy.

The products, named by arena as Tech Wool, have been developed using innovative Woolmark-certified wool blend fabrics made with Australian Merino wool varns (30-54%) and cutting-edge technological fibres. The ultralight and compact fabric quarantees the highest level of performance in terms of breathability, comfort, resistance to saltwater and chlorine, and UV protection.



Embraced by Olympic swimmers **Zsuzsanna** Jakabos (above) and Nicolò Martinenghi (see middle column), the new Tech Wool collection from Italian swimwear brand arena offers beach lovers both the performance benefits and also the style of Australian Merino wool.



Olympic gold medallist Nicolò Martinenghi advertising the Merino wool swim shorts.

Paris 2024 Olympic gold medallist backs wool

Olympic swimmers Nicolò Martinenghi from Italy and Zsuzsanna Jakabos from Hungary are featured wearing the new Wool Tech beachwear in arena's advertising.

Reflecting arena's skill at picking the most talented athletes with which to partner, Nicolò Martinenghi went on to win the gold medal in the 100m breaststroke at the Paris 2024 Olympics.

"When arena informed me that there were wool swimsuits in the new Beachwear Premium Spring-Summer 2024 collection, I didn't know what to expect. I immediately thought of sweaters or winter clothes, not summer," Nicolò said. "Then, when I tried it on, I was impressed by the comfort and elasticity of the fabric that fits perfectly to the body."

"As an athlete, I know that innovation has always distinguished the arena brand, and with this line in Merino wool, it proves it once again."

> Nicolò Martinenghi, Paris 2024 Olympic Champion

Collaboration with Woolmark builds success

The new Tech Wool collection is a result of arena having been introduced by The Woolmark Company to the versatility and benefits of Merino wool.

"For us, the adoption of innovative, sustainable, and surprising fabrics, such as a wool base, represents a winning path. In The Woolmark Company, we have found an excellent partner, with whom we can walk that path together."

Giuseppe Musciacchio, arena Deputy CEO

AWI's Regional Manager for Central & Eastern Europe, Francesco Magri, says Merino wool is the ideal choice for arena's future direction, aligning with the growing demand for wearable performance with the environment in mind.

"The collaboration with arena once again underlines the versatility of wool, even in unexpected contexts such as beachwear. And it's precisely the intrinsic characteristics of this extraordinary fabric, along with it being a natural fibre, that makes it a key ingredient that can offer technical performance as well as representing a responsible choice for the planet," he said.

"To have arena ambassador Nicolò Martinenghi win at the Olympics shows calibre of sportspeople associated with the brand."

"With its exceptional natural properties, Merino wool now sits high on the radar of the sports and performance world, and is increasingly prevalent in the new market of aquatic activities."

Francesco Magri, AWI Regional Manager, Central & Eastern Europe

Offering natural breathability, fast-drying capabilities, elasticity and UV protection, Merino wool is both an innovative performance fibre and a 100% natural, renewable and biodegradable choice for sportswear that does not contribute to microplastic pollution of the sea.

More information:

www.arenasport.com/en_row/beachwear

MORE PROOF OF WOOL'S BIODEGRADABILITY

PHOTO: Alexandr Lebedko

The results of recent AWI-funded research into the biodegradability of different fibre types in industrial composting conditions were published in June in a peer-reviewed journal, adding to the growing body of scientific evidence proving wool's eco-credentials.

AWI-funded research shows that machine-washable wool fibres as well as untreated wool fibres readily biodegrade in industrial composting conditions, in contrast to synthetic fibres that do not. The results also show that the Hercosett resin used as part of the machine-washable wool treatment does not create microplastic pollution under composting conditions.

The results of this research, undertaken by AgResearch in accordance with an established standard test method, were published in June in a peer-reviewed journal, adding extra credibility and access to the research.

These positive results regarding the biodegradability of wool in the terrestrial (land)

environment are in addition to the positive results regarding the biodegradability of wool in the marine environment that were reported in the June edition of *Beyond the Bale*.

Although wool has been informally demonstrated on many previous occasions to biodegrade readily when buried in soil, the advantage of this new study using industrial composting conditions is that it was undertaken in a strictly controlled environment. This enabled accurate quantification of the rate of biodegradation and the potential to examine residues.

The samples used in the study were sourced from comparable lightweight base-layer fabrics, made from the six fibre types being studied: two types of Merino wool (machine

washable wool and untreated wool), viscose rayon, and three synthetic fibres: polyester, nylon and polypropylene.

The results of the study showed that both types of wool readily biodegraded, as did the cellulose-based viscose rayon. Synthetic fibres did not biodegrade at all. Significantly, the scientists did not detect any formation of microplastic polyamide fragments resulting from the biodegradation of machine-washable wool. The polyamide resin used in the machine-wash treatment (Hercosett) for wool is very different from common commercial polyamides.

The results of the research were published in June in an open access paper (available free on the internet) titled *Biodegradation behavior of wool and other textile fibers in aerobic composting* conditions in the *International Journal of Environmental Science and Technology.*

"This work has increased our understanding of the biodegradability of wool by accurately validating its behaviour in composting conditions, which adds to our existing knowledge of the fibre during soil burial and in the marine environment. Wool is durable when in use, but degrades readily at the end of its life when it is disposed of and does not contribute to microplastic pollution," said AWI Program Manager, Fibre Advocacy & Eco Credentials, Angus Ireland.

"The study adds to the growing body of scientific evidence that recommends an increased use of natural, non-synthetic materials, such as wool, in global textile markets."

> Angus Ireland, AWI Program Manager

The research forms part of AWI's broader efforts to more completely account for the impacts of textiles across all life stages in environmental rating schemes such as the European Union's Product Environmental Footprint (PEF) for apparel and footwear – see page 62.

"Natural fibres such as wool readily biodegrade and consequently don't amass in the environment. This important difference between natural and synthetic fibres needs to be properly accounted for in the PEF methodology for it to be more credible and scientifically defensible," Angus added.

AUSSIE WOOL PELLETS - A NEW MARKET FOR BROAD WOOL



ifth generation farmer and wool classer Sherri Symons from Ellerslie in south west Victoria last year launched Aussie Wool Pellets, which are biodegradable, slow-release fertiliser pellets made from raw, broad wool.

Developed for a variety of uses within the gardening market (such as in flower beds, vegetable plots, lawns, potted plants), Sherri set up the business to add value to the broad

micron wool from her family's composite flock. She produces the pellets on the farm using a specially designed pellet mill.

Taking full advantage of woot's biodegradability, the pellets fully decompose over 6 to 12 months and release valuable nutrients such as nitrogen, potassium and carbon into the soil, as a natural and organic fertiliser. The wool pellets' other benefits include being able to hold three times their own weight in water and therefore helping retain water within the soil, being a slug and snail deterrent, and helping aerate the soil.

In 2023, Sherri won an accelerator program called 'The Ideas Place', run by local councils and backed by LaunchVic. The program is designed to help entrepreneurs start and build their business. Sherri was also a double winner at the 2023 Sheepvention Invention Competition, winning both the House & Garden Class and the J. Nagorcka

More information:

www.aussiewoolpellets.com.au



WOOLMARK ENGAGEMENT WITH THE TEXTILE TRADE

International trade shows and industry development centres present key opportunities for The Woolmark Company to engage with and inspire the world's leading textile manufacturers, brands and retailers to include wool in their collections.

International trade shows



Trade shows are a unique opportunity for The Woolmark Company to connect with key supply chain partners and showcase the latest innovative wool developments.

ach year, AWI's subsidiary The Woolmark Company attends and exhibits at the world's most important international textile, yarn and industry trade shows. The shows are like a magnet for leading product developers, brand buying and sourcing teams, designers, manufacturers and retailers from across the world.

"Exhibiting at global trade shows is a vital way for the company to promote to the world's leading textile and apparel companies the natural and performance benefits of Australian wool, and highlight the latest technologies for the processing and production of wool textiles, products and garments. Trade shows are also key to expanding the exposure of The Wool Lab sourcing guide," explained AWI General Manager, Processing Innovation & Education Extension, Julie Davies.

"Our presence provides an important source of leads for business development as well as the opportunity to support our trade partners. It enables in-depth discussions and connections with the textile supply chain to bring wool to the forefront of their minds when they are considering fibre and fabric choices for their future collections and product ranges."

"For 2024/25, The Woolmark Company will take a more focused approach and exhibit at trade shows that defend our market position – such as yarn, textile and sports

shows – as well as exhibiting at shows that we believe will allow us exposure to new market opportunities, such as global work, health, safety and homeland security, first responders, and interiors markets.

"In addition to the 11 global trade shows at which we plan to exhibit, we are also planning for our local teams to attend and walk 26 other global trade shows. Attending and walking shows still provides the opportunity to schedule meetings with existing supply chain partners; connect with new leads, markets and categories; and collect vital market intelligence – all providing a solid return on investment."

Partnerships with global development centres



Global development centres are collaborative hubs that connect the supply chain and build new commercial opportunities for wool. Pictured is the Xinao Knitwear Development Centre in China.

In addition to attending and exhibiting at trade shows, The Woolmark Company currently partners with seven development centres across the world to help connect brands and manufacturers with the supply chain and thereby help build new collaborations, commercial opportunities and demand for Australian wool.

"To heighten The Woolmark Company's global exposure, partnerships with development centres are an effective way to engage directly with trade partners, designers and brands to hold workshops. We are able to offer support and expertise with the opportunity to work on product and process developments. These engaging spaces in strategic locations across

the world are collaborative ventures with like-minded partners that encourage clever, innovative thinking," Julie said.

"The centres help the textile and apparel industries to learn about the natural benefits, versatility, and technical possibilities of Australian wool, ensuring it remains competitive against other fibres and inspires designers, brands and retailers to use wool in their product ranges."

The current Woolmark-partnered development centres are located in:

CHINA

- Donghua Wool Education Centre (Shanghai) – established in 2018 with a focus on wool education and research at Donghua University.
- Nanshan Weave Centre (Shandong) established in 2014 with leading wool textile enterprise the Nanshan Group and has a focus on woven textiles from fibre to garment.
- Xinao Knitwear Development Centre (Zhejiang Province) – a collaboration with knitwear manufacturing giant Xinao Textiles with a focus on knitting products from fibre to yarn.
- Santoni Material Experience Centre (Shanghai) – a collaboration with knitting machinery leader Santoni with a focus on circular seamless knitting and design.

EUROPE

- D-House Urban Laboratory (Milan, Italy)

 a hub of luxury fashion engineering focused on R&D with top tier brands and supply chain.
- La Caserne (Paris, France) a fashion hub for luxury and eco-focused brands focused on improving sourcing and traceability.

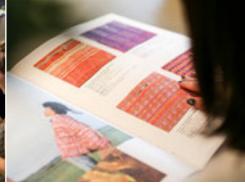
USA

 Variant 3D (California) – focuses on knit programming software and commercial wool prototypes with top level brands.

"Ultimately, all our activities at trade shows and development centres aim to grow profitable demand for wool for the benefit of Australian woolgrowers," Julie said. The Wool Lab is a premier sourcing guide to the world's best commercially available wool fabrics and yarns. Since its inaugural edition twelve years ago, it has become an important tool for the global textile industry and is helping to build the demand and use of Australian wool globally.







Brands and retail buying teams viewing wool swatches in The Wool Lab.

The Wool Lab is a sourcing guide for designers and brands that contains swatches of a selection of the most innovative and quality wool fabrics, yarns and processes commercially available on the market from the best spinners, knitters and weavers in the world.

"For each of the Autumn/Winter and the Spring/Summer seasons, we reach out to The Woolmark Company's global supply chain network to source their latest fabric and yarn developments," explained AWI General Manager, Processing Innovation & Education Extension, Julie Davies.

"With these, we curate a sourcing guide with inspirational images and a selection of

the best swatches that can then be ordered by designers and buyers directly from the manufacturers through The Wool Lab. By providing this service, we are helping to inspire brands' material strategies and forge strong relationships within the supply chain, thereby supporting the demand for wool."

From the two editions of The Wool Lab in the 2023/24 financial year, there were 12,630 requests for swatches with 393 supply chain partners contributing fabrics to the collections.

The latest edition of The Wool Lab, which was launched at the end of June, contains swatches for the northern hemisphere's Autumn/Winter 2025/26 retail season and are

grouped into five theme books that reflect some of the growing market opportunities for wool – see the opposite page.

Physical editions and swatches of The Wool Lab form the foundation of what The Woolmark Company presents to brands and retail buying teams at trade shows and its wool development centres (see previous page), educational seminars, and directly in one-on-one viewings.

There is also a digital version of The Wool Lab that anyone including woolgrowers can view on the Woolmark website – see box below.

The Wool Lab Digital

The Wool Lab Digital is the online version of the respected wool fabric and yarn sourcing guide. Although the physical editions of The Wool Lab remain popular, The Wool Lab Digital was launched in 2021 by The Woolmark Company in response to the evolving needs of today's market environment and to extend the sourcing guide's reach.

While the structure and functionality of The Wool Lab has been adapted digitally, the core of The Wool Lab Digital remains the same, providing a digital showcase of swatches from wool fabric and yarn suppliers, for designers and buyers to browse and source their own samples.

The Wool Lab Digital is freely accessible to fashion and textile industry professionals in a

dedicated area of www.woolmark.com. By simply registering (for free), users are able to browse the sourcing guide's themes and swatches – and choose a selection of wool fabrics and yarns in which they are interested for their upcoming collections.

Through the online platform, they can then contact the suppliers of their favourite swatches, anywhere in the world, to source samples and do business.

More information:

www.woolmark.com/the-wool-lab







Example swatches from the latest edition of The Wool Lab

The latest edition of The Wool Lab comprises a massive **449 swatches**, categorised into a collection of **five themes** that reflect the diverse applications that wool can be used in the current textile and fashion landscape to generate business opportunities for the industry.

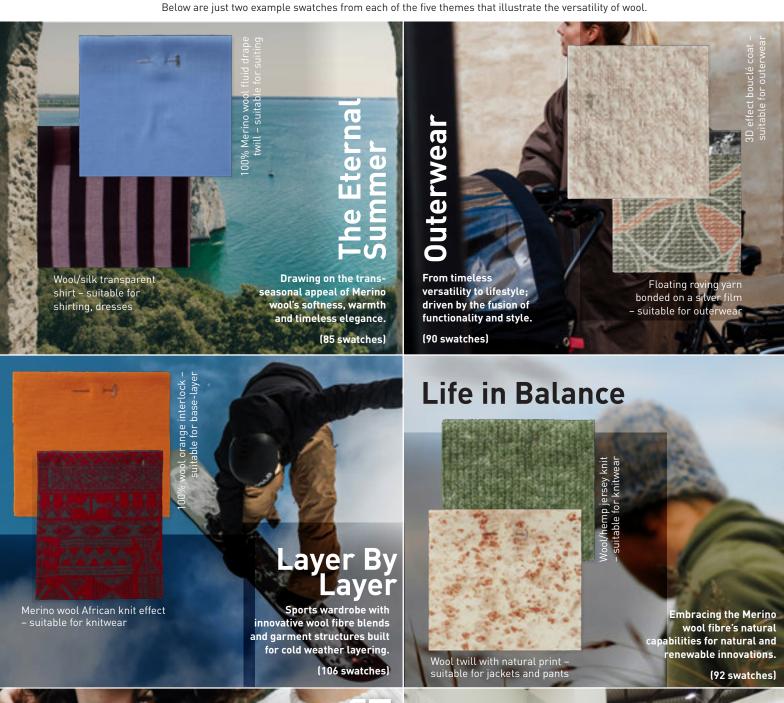




PHOTO: Oleksii Liskonih

With Northern European brands and retailers increasingly 'proximity sourcing' garments from Portugal, AWI has been working with the country's textile supply chain to help build its use of Merino wool.

As part of its Emerging Markets Strategy,
AWI has identified Portugal as a country
that could potentially be a much larger
manufacturing market for Australian wool.
This is due to brands and retailers in Northern
European markets, where wool is consumed in
high volumes, increasingly seeking the security
of sourcing its garments from countries
relatively close to home, such as Portugal.

This shift to proximity sourcing is partly a desire to avoid the logistical delays faced with transporting products from further afield; they want to lessen lead times as well as risks. In addition, the textile industry's focus on sustainability and traceability has meant that brands and retailers are increasingly examining ways to reduce the carbon footprint of the their supply chains.

The Portuguese textile industry is well suited for opportunities with wool, partly due to the industry's already established access and supply of custom manufacturing to the Northern European market. Another strong point is its strong circular knitwear sector, and the level of its highly skilled labour for technical garments. Furthermore, an overall strategy of the Portuguese textile industry is to focus on sustainability which gives this market added sourcing desirability for brands.

AWI through its subsidiary The Woolmark Company has been increasingly working with the textile supply chain in Portugal to increase its use of Australian wool. Read on to find out about a few of AWI's recent initiatives.

Wool Insights & Innovations workshop in Portugal

For the first time in Portugal, The Woolmark Company in April hosted two workshops that highlighted the benefits and opportunities of Australian Merino wool for the Portuguese textile and clothing industry, with the aim to inspire the supply chain to choose the fibre in their upcoming collections.

As well as a series of presentations about the fibre, sustainability, innovation and market trends, The Woolmark Company team showcased a fantastic selection of innovative wool garments from categories including sport, workwear, fashion, automotive, and seamless and whole garment knitwear. Attendees could



Attendees at the Wool Insights & Innovations workshop.

touch and handle the garments which helped stimulate their creativity and desire to innovate with and choose wool.

Held in the city of Porto, the workshop was attended by 79 people from 43 companies. It was well received by those attending, which included CEOs, business directors, design and development teams, and innovation and sustainability officers. There was high interest to increase their wool consumption and start new collaborations with wool in the Portuguese market.

The Wool Lab special edition: Out of Portugal

Earlier this year, The Woolmark Company issued a special edition of its The Wool Lab sourcing guide which was devoted entirely to Portugal's textile supply chain.

The special 'Out of Portugal' edition of The Wool Lab is available online at www.woolmark.com/the-wool-lab



Titled 'Out of Portugal', the edition contains nearly 100 quality wool fabric swatches from 30 of Portugal's best spinners, weavers, knitters and home textile manufacturers.

This special edition of The Wool Lab contains swatches of wool fabric and yarns that are commercially available on the market from The Woolmark Company's supply chain partners in Portugal. It aims to position the Portuguese textile industry as a valued source of Merino wool fabrics for international brands for their upcoming collections and thereby increase the demand for Merino wool.

The Woolmark Company has also included fabric swatches from Portuguese manufacturers in its regular seasonal editions of The Wool Lab (see pages 54-55).

Student education seminars



An education seminar run by The Woolmark Company at the ESAD College of Art and Design in Porto.

The Woolmark Company's student education strategy has been extended to Portugal with seminars there to educate tertiary fashion and textile students about the premium benefits of Australian wool. The seminars highlight Merino wool as a natural, sustainable fibre with unique performance qualities, offering plenty of potential for innovation.

By educating and inspiring students in the early stage of their careers about the properties and benefits of Merino wool, The Woolmark Company is laying a foundation of knowledge and appreciation for the fibre that will hopefully continue with them as they progress through their professional lives.

BIG OPPORTUNITIES FOR WOOL IN LATIN AMERICA

AWI has been exploring opportunities to increase the manufacture of Australian Merino wool products in the Latin American countries of Mexico and Peru, both of which have strong textile production capabilities and excellent market access to the USA.

s part of the development of its Emerging A Markets Strategy to diversify the Australian wool supply chain and find new markets for the fibre, AWI last year researched the potential for increasing the production of Australian wool products in Latin America.

The research identified a large textile manufacturing base in the region, from early stage processors to garment producers, that have the capacity, economic influence, proximity to consumer markets, and eagerness to grow their wool offering. In addition, brands and retailers in the USA are increasingly interested in sourcing their goods from closer to their consumer markets to reduce logistical risks, lead times and their carbon footprint.

From its research, AWI identified Mexico and Peru as the two countries in Latin America that have the most potential to increase the region's Australian Merino wool use, thereby providing opportunities for diversification of the wool supply chain for brands and retailers, especially those operating in the USA market. Ultimately, this would bolster the demand for Australian Merino wool which will benefit Australian woolgrowers.

AWI through its subsidiary The Woolmark Company, and local contracted experts, have recently been working in the two countries and identified concrete business opportunities and the potential for new demand for Australian wool in these two countries.

Mexico

Mexico is a key country in this region whose textile sector can meet the required service levels, delivery times and quality. The country has strong logistics, efficient supply chains, low levels of trade bureaucracy and dependable utilities within its special economic zones.

Mexico has many free trade agreements and their market is one of the most open



AWI R&D Commercialization Manager, Americas, Sarah Schlenger, with Woolmark consultant Jorge Plata (right), pictured with Martin Urrutia Z, President of Santiago Textil, the very first Mexican Woolmark licensee together holding the original licence presented to the company in 1966.

and competitive in the world. The United States-Mexico-Canada Agreement (USMCA) is the most powerful of Mexico's trade agreements, promoting US investment in Mexico's apparel industry.

The USA is Mexico's largest importer of textiles and apparel (85% of the market). Transport to the USA takes between one and four days, and 22 to Europe.

The Mexican textile industry is pivoting away from domestic markets and increasingly regarding the export of luxury and performance products as the industry's future.

Textile manufacturers in Mexico are asking The Woolmark Company to connect them with downstream customers, upstream fibre and material suppliers, and provide them with training about wool processing and wool manufacturing.

Peru has the potential for high quality production, quick speed to market,

advantageous free trade agreements, and broad manufacturing capabilities. The country has the full production chain within its borders to produce a wide variety of products, from large quantities and bulk production to smallbatch, slow fashion.

Nearly 80% of Peru's apparel exports go to the Americas, with 50% to the USA. Peru has preferential trade agreements with 53 countries including the USA, EU, and China.

The country has reliable energy, transportation, and trade across its borders. Its lead times vary from 30 to 60 days. Typical shipping times are 11 days to the USA and 18 to Europe.

The Peruvian textile industry is oriented towards major luxury fashion and sportswear brands. The focus on sustainability by these brands and local manufacturers presents a significant commercial development opportunity for Australian wool.

The Woolmark Company has experienced a very positive reception in the country, with opportunities identified in key market sectors for both knit and woven fabrics, including for 100% Australian wool products and also blends with pima cotton and alpaca.



The Woolmark Company consultant, Juan Carlos Aragon, delivering a presentation to the Peruvian Association of Textile Technicians on processing innovations with Australian Merino wool.

Current Woolmark in-kind activities

The Woolmark Company and its consultants in the region currently provide in-kind support to the textile supply chain in the two countries, including:

- Identifying opportunities for building new supply chain connections.
- Identifying opportunities for technical transfer to the countries' processors/ manufacturers.
- Providing wool education to designers and
- Translating training modules into Spanish.
- Assisting suppliers to provide swatches for The Wool Lab sourcing guide.
- Promoting wool at industry trade events.

- Providing interviews with the trade media.
- Identifying potential companies for Woolmark licensing.
- Increasing the region's applications in the International Woolmark Prize and Woolmark Performance Challenge talent development programs.

2023/24 season production volumes

The Australian Wool Testing Authority (AWTA) tested 334.7 million kilograms (mkg) of Australian greasy wool for the recently completed 2023/24 season, which is a drop in production of 3.8% compared to the previous season's 348.0 mkg.

Given the Australian Wool Forecasting Committee has forecast a 5.8% drop in production for the current season, this suggests the AWTA key test data will total about 315 mkg for 2024/25.

NSW was the state that had the largest drop in volume in 2023/24, with its production falling 5.6 mkg (a 4.1% drop) compared to the previous season. However, NSW remained the dominant wool producing state and provided well over a third (36.7%) of the national volume by weight of wool tested for the 2023/24 season, a similar percentage to the 36.9% that NSW recorded the previous season.

WA was the state with the second largest drop in volume, down 5.0 mkg (7.3% drop) in 2023/24; the WA share of the national clip fell to 18.9% in 2023/24 after being 19.6% of last season's total. Queensland was the state with the highest percentage drop in volume, a 16% drop (1.7 mkg). South Australia was the only state to record an increase, a 4.8% increase or 2.4 mkg.

Figure 2: Clip distribution by micron group (mkg)

20

n

* forecast 380,000 360,000 320,000 320,000 280,000 240,000 240,000

2012/13 2013/14 2014/15 2015/16 2016/17 2017/18 2018/19 2019/20 2020/21 2021/22 2022/23 2023/24 2024/25

Table 1: Season production by state

	2022/23 (mkg)	2023/24 (mkg)	Difference (mkg)	Difference (%)	2023/24 national share
NSW	128.4	122.7	-5.7	-4.4%	36.7%
Vic	79.6	76.6	-3.0	-3.8%	22.9%
WA	68.4	63.3	-5.0	-7.3%	18.9%
SA	49.5	51.9	+2.4	+4.8%	15.5%
Tas	11.4	11.1	-0.3	-2.7%	3.3%
Qld	10.7	9.0	-1.7	-16.0%	2.7%
TOTAL	348.0	334.7	-13.3	-3.8%	100%

Source: AWTA key test data

Table 2: Season production by micron

	2022/23 (mkg)	2023/24 (mkg)	Difference (mkg)	Difference (%)	2023/24 national share
Superfine <18.5µm	109.6	117.8	+8.2	+7.4%	35.2%
Fine 18.6 to 20.5µm	122.7	112.5	-10.2	-8.3%	33.6%
Medium 20.6 to 23.5µm	49.3	38.9	-10.4	-21.1%	11.6%
Crossbred > 23.6µm	66.4	65.5	-0.9	-1.3%	19.6%

Source: AWTA key test data

Superfine < 18.5µm

Fine 18.6 to 20.5µm

Medium 20.6 to 23.5µm

Crossbred > 23.6µm

60

2023/24 = 2022/23

۸n

100

120

140

4١

2023/24 season production by fibre diameter

220,000 200,000

180.000

Fibre diameter is the primary influencer of price returns. The seasonal data quite clearly shows a trend of woolgrowers targeting the higher priced superfine wool production zone, whilst anecdotally trying to retain wool cut/ha. This in theory is good for total clip value and GDP.

Production gains of 7.4% have been recorded year on year on the superfine and ultrafine Merino (less than 18.5 micron) wool types. This is the only wool sector where gains have been registered.

The largest loss of wool type production has been in the Medium wool sector (20.6 to 23.5 micron), which has seen its percentage share of the clip drop by 21.1% year on year. By weight though, the loss is equivalent to the fine wool's drop in production which is a touch over 10 mkg in both the wool fibre diameter sectors.

The broadest – generally crossbred – wools of greater than 23.5 micron have decreased by 1.3% season to season, although the percentage share of the clip of crossbred grew from 19% to 19.6%.

2023/24 volume by auction throughput

Wool selling at auction at the end of the 2023/24 selling season has seen:

Offered: There were **2.8% fewer bales** (52,318, approx. 9.4 mkg) offered at auction in 2023/24 compared to the previous year: 1,797,792 bales (approx. 321.8 mkg greasy) offered in 2023/24 compared to 1,850,110 bales (approx. 331.2 mkg) offered in 2022/23.

Sold: There were **3.2% more bales** [51,698 bales, approx. 9.3 mkg] sold at auction in 2023/24 compared to the previous year: 1,659,497 bales (approx. 297.1 mkg greasy) sold at auction in 2023/24 compared to the 1,607,799 bales (approx. 259.8 mkg) sold in 2022/23. **A\$2.24** billion was sold through the auction system in 2023/24 compared to the **A\$2.42** billion in 2022/23, a 7% fall in gross raw wool value of approximately **A\$180** million for the past year.

Clearance rate at auction in 2023/24 was **92.3%** nationally of all wool offered sold, compared to the **86.9%** cleared in 2022/23. Whilst offerings were down slightly, more wool was sold. The selling intent of growers was also far more prevalent, and saw an improvement rate of **6.2%** of wools being offered being sold.

2023/24 wool price stability

The past season could only be described as average, with possibly one of the least fluctuating price ranges seen in many years. The lowest Eastern Market Indicator (EMI) of the season was at the commencement of the season at 1126ac, with the top weekly closing EMI of 1213ac in the first week of the new 2024 calendar year. This was an intra seasonal difference of just 87ac, with a trading range of just 3.8% around the mean.

The 2023/24 season saw the EMI in AUD appreciate from 1126ac/clean kg to conclude at 1142ac/clean kg. This is an intra seasonal gain of 16ac/clean kg or 1.42% in Australian dollar terms. The season averaged an AUD EMI of 1155ac/clean kg.

The USD EMI gained 16usc/clean kg from 748usc/clean kg at the start of the season to conclude at 762usc/clean kg. This is a seasonal gain in USD of 16usc or 2.14%, slightly outperforming the Australian dollar value gain. The season averaged a USD EMI of 755usc/clean kg.

The 2023/24 season saw the Western Market Indicator (WMI) in AUD gain 9ac/clean kg to 1281ac/clean kg after opening the selling year at 1271ac/clean kg. This is an intra seasonal gain in the AUD WMI of 0.79%. The AUD WMI averaged 1291ac/clean kg for the season.

Export destinations for Australian wool

With just a month left of data from the ABS (Australian Bureau of Statistics) to be added for the 2023/24 season, China has so far imported 86.4% of the Australian clip. In dollar value, China has imported 84.0% of the Australian clip.

Whilst Italy's volume share is very low at just 2.7%, it is 5.1% of the value when looking at export earnings. It is still quite a disappointing figure, because earnings from the Italian import are usually well above 12% of the export value. India has imported about 5% of the clip by both volume and value. Exports to Czechia are heavily weighted towards crossbreds so the volume figure sits well above the dollar value.

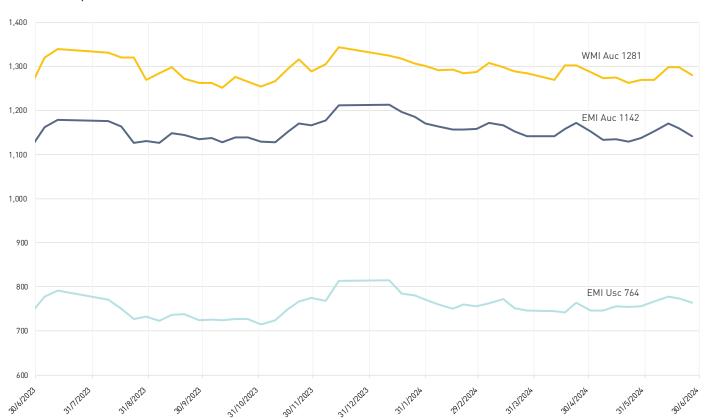
There are a total of 13 countries that receive greasy wool, but in a commercial sense, that destination list drops to six significant and viable users given our volumes produced. For the current season, Australia has exported 96.3% of its wool (by weight) in the greasy, raw form. 1.2% is scoured wool and 2.5% carbonised. 29 countries have received exports from Australia this current season in all wool forms, either greasy or semi processed.

Export destinations for Australian wool 2023/24 season (up to May 2024)

	Volume	\$ value
China	86.4%	84.0%
India	5.0%	4.5%
Italy	2.7%	5.1%
Czechia	2.3%	1.4%
Others	3.6%	4.7%

Source: ABS

2023/24 season price indicators



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/or avoid Discounts for their wool.

Fast facts

- To attract the highest price for their wool, all woolgrowers, regardless of their mulesing status or 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.
- The NWD declaration rate has increased by 2.0 percentage points from 73.6% in 2022/23 to 75.6% in 2023/24. The NWD declaration rate for Merino wool has increased by 1.9 percentage points to 78.8%.
- Declaration rates for Non Mulesed (NM) wool continue to steadily climb (currently 21.5% of all wool; 15.3% of Merino wool), as do the rates for Mulesed with Analgesic/Anaesthetic (AA) wool (currently 43.0% of all wool; 50.9% of Merino wool).
- Remember to sign and date your NWD, otherwise the Mulesing Status of your mobs/lines of wool will not be shown on the sale catalogue and test certificate, which can reduce the number of buyers bidding on your wool, as well as the price you receive. Note, eSpecis can be electronically signed.

The 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 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 and choice in the marketplace.

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 2023/24 for all wool

Mulesing Status	NSW	Qld	SA	Tas	Vic	WA	National	
NM	26.4	41.0	13.1	51.0	25.1	6.7	21.5	
СМ	3.5	3.2	3.0	6.9	3.2	1.0	3.0	
LN	LN 0.0		0.1	0.0	0.5	0.1	0.1	
AA	42.0	31.7	54.7	22.7	44.9	38.9	43.0	
М	7.2	8.0	9.7	4.6	4.5	11.8	7.9	
ND	20.8	16.1	19.4	14.8	21.8	41.5	24.5	
Total bales	578,886	44,718	236,846	48,869	280,307	284,454	1,474,080	
% declared	79.2	83.9	80.6	85.2	78.2	58.5	75.6	

With the exception of Queensland, all states improved their declaration rate for the 2023/24 season. Table 1 shows that Tasmanian woolgrowers top the list for declaration rates at 85.2% of wool sold in 2023/24 followed by Queensland woolgrowers at 83.9%. The eastern states averaged close to 79.6% wool declared. The WA declaration rate is gathering pace with the biggest increase of any state since 2022/23 (up 4.3 percentage points) but it still has opportunity to improve.

Tasmanian and Queensland woolgrowers also top the NM categories at 51.0% and 41.0% 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 expression of wrinkle tends to be lower in these environments, the weather in Tasmania is relatively cooler and windy and Queensland is hotter resulting in shorter fly seasons.

Table 2. NWD declaration rates (%) by Mulesing Status and state for season 2023/24 for Merino wool

Mulesing Status	NSW	Qld	SA	Tas	Vic	WA	National	
NM	19.0		8.8	42.5	16.3	5.9	15.3	
СМ	CM 4.1		3.3	10.0	3.9	1.0	3.3	
LN	0.0	0.1	0.1	0.0	0.8	0.1	0.2	
AA 52.0		32.1	61.4	33.3	60.1	40.4	50.9	
М	8.5	8.0	10.3	6.8	5.2	12.1	9.1	
ND	16.2	15.7	16.0	7.4	13.7	40.6	21.2	
% declared	83.6	84.2	84.0	92.6	86.3	59.4	78.8	

Merino wool declaration rates continue to improve across most states and categories. The message to declare is being heard and industry support is evident. Table 2 shows that the Tasmanian declaration rate (Merino) continues to lead all states at 92.6%.

Compared to the previous season, the national Merino clip declared as NM rose to 15.3% (up 7.5% YoY). All states increased their NM declaration rate (Merino), with Tasmania now the highest rate at 42.5%, followed by Queensland at 40.8%. The state with the biggest annual increase in NM declarations (Merino) was Victoria which rose by 14.0% YoY to 16.3%, followed by Tasmania up 12.1% YoY to 42.5% and South Australia up 10.0% YoY to 8.8%. Nationally, there was 4.9% YoY growth in AA declarations (Merino) to 50.9%, with South Australia now at 61.4%, Victoria at 60.1% and NSW at 52.0%.

Mulesed (M) declarations (Merino) have reduced by 11.9% YoY nationally, with the biggest YoY decreases in NSW (26.7%) followed by Victoria (20.0%). These two states are the largest wool producing states in Australia.

The WA declaration (Merino) rates have increased 8.6% YoY to 59.4%, but remains well behind all states by a minimum of 24.2 percentage points (NSW 83.6%). With an ND rate of 40.6%, WA has the greatest opportunity to improve.

Table 3. NWD declaration rates (%) by Mulesing Status and breed/micron (µm) for season 2023/24

Breed	Merino						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	11.1	8.2	15.9	179,896	39.3	39.6	43.5	46.2	136,854	
СМ	3.3	3.4	2.9	14.2	39,217	1.7	1.2	1.2	1.6	4,640	
LN	0.3	0.1	0.1	0.0	2,034	0.0	0.0	0.0	0.0	26	
AA	52.0	50.5	48.5	32.9	597,912	14.0	11.8	11.2	12.4	36,454	
М	6.5	10.5	13.8	15.6	106,506	2.5	3.5	2.3	3.6	10,143	
ND	16.8	24.4	26.5	21.4	248,564	42.6	43.9	41.8	36.1	111,834	
Total Bales	537,534	495,899	140,331	365	1,174,129	242	2,545	59,144	238,020	299,951	

Table 3 shows that Merino breeders with lower micron wool, less than 18.6 microns, are most likely to declare, with only 16.8% of their wool sold not declared. By breed, the declaration rate for Merinos is 78.8%, whilst the Crossbred declaration rate is 62.7%; 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 2021/22 to 2023/24 (comparison with declared as Mulesed)

		MERINO								NON-MERINO			
		16	17	18	19	20	21	22	27	28	29	30	
Non Mulesed (NM)													
	2020/21	78	77	68	53	51	12		7	5	8		
	2021/22	25	36	15	17	19	6		0	-2	1	0	
	2022/23	19	17	17	7	2			0	5	4		
Ceased Mulesing (CM)													
	2020/21		61	40	31								
	2021/22		30	14	14	10	6						
	2022/23			9	5	2	1						
		ı	Mulesed	with Ar	naesthe	tic &/or	Analges	sic (AA)					
	2020/21		16	12	13	14	1	6	3	5	3		
	2021/22		19	5	9	6	4		0	0			
	2022/23			8	5	2	1		0	4	4		
	Not Declared (ND)												
	2020/21		-6	-5	-7	-10	-4		-7	-7	-10	-6	
	2021/22	-39	-28	-24	-2	0	0		-4	-15	-13		
	2022/23	-15	-15	-7	-5	-5	-1		-7	0	-1		

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 μm), 75–99 mm (19–21 μm), 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 or AA.** This is a greater issue for WA woolgrowers as their declaration rate is 58.5%, lower than all the other states that range from 78.2% to 85.2% wool declared.

Given the subdued market during the year, the price incentives are more conservative than previous years. This reflects the relative demand for wool through the supply chain. (Note the AWEX data does not include wool sold direct from woolgrowers to wool buyers.)

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:

www.awex.com.au/market-information/mulesing-status/



Don't let your Declaration be wasted!

If 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.

AWI ADVOCACY FOR WOOL IN THE EUROPEAN UNION

PH0T0: mesh cube

European Union (EU) regulatory proposals for environmental labelling on apparel products currently rate wool and other natural fibres poorly. It is critical that AWI continues to advocate EU policymakers amend the proposals before they become law, especially because other markets across the world could potentially adopt similar initiatives.



The Make the Label Count campaign mark.

As part of the EU's attempts to shift to a climate-neutral and circular economy, EU policymakers have been working for several years on a tool – the Product Environmental Footprinting (PEF) project – to introduce environmental labelling on apparel products for sale in countries across the EU.

Whilst the objective to guide consumers towards choosing the most sustainable products is laudable, the PEF methodology in its current form, counterintuitively, scores apparel and footwear products made from natural, farmed materials (such as wool) poorly compared to synthetic, mined materials.

Wool is unfairly disadvantaged because the current PEF methodology is narrowly drawn. For example:

- While PEF factors in all the impacts
 of farming to produce fibre (such as
 greenhouse gases, water use, land use),
 PEF counts the impact of fossil fuels only
 from the well head meaning synthetics
 get a big head start.
- PEF doesn't account for the negatives of synthetic materials, such as microplastic pollution or plastic waste from clothing ending up in landfill.
- PEF doesn't fully account for the positives of wool, such as biodegradability, renewability, and nature conservation.

The threat to wool and the need for action

The current PEF methodology risks the introduction of greenwashing that will mislead well-intentioned consumers about the environmental impacts of apparel and footwear products – it would encourage them to buy

synthetic products in preference to natural products like wool. This could lead to many brands shifting their sourcing away from wool. Therefore, PEF in its current form presents a significant threat to the wool industry.

AWI CEO John Roberts says addressing the biases and limitations within the PEF tool is essential to ensure a fair and accurate assessment of wool's sustainability credentials.

"It is especially important for the Australian wool industry that the PEF methodology is corrected, because the EU currently consumes about a quarter of all Australian wool," John said.

"Furthermore, due to the EU being the driving force of environmental footprinting, it is anticipated that the PEF initiative could become the most influential marketfacing reporting system for environmental credentials, with other markets across the world potentially adopting similar initiatives in their jurisdictions."

"The PEF proposals as they currently stand are not only a threat to the wool industry, they also ultimately undermine the EU policymakers' own sustainability objectives and ambition to phase out fast fashion."

John Roberts, AWI CEO

AWI's ongoing advocacy to improve PEF

During the past four years, AWI has been working to address the shortcomings of PEF on two fronts. Firstly, in the European Commission's PEF Technical Secretariat where AWI has been working with the International Wool Textile Organisation (IWTO) to provide expert advice based on its science and research. Secondly, in advocating to EU policymakers as part of the Make the Label Count campaign.

"Wool was part of the PEF Technical Secretariat right from the start – we went with our sleeves rolled up to positively contribute," John said.

"The wool team were the only member to bring experts in life cycle assessment (which is the science on which PEF is based), consumer textile research and textile testing research. We undertook targeted research and published

peer-reviewed papers to provide a sound evidence-base supporting our proposals.

"However, Cascale (formerly known as SAC, which created the Higg Index) and many of its members – large global fast fashion brands – were also involved from the start and used their power to introduce methodology biased in favour of synthetics, which has been difficult to change. Hence there is a need to raise the concerns with policymakers via the Make the Label Count campaign."

Through the Make the Label Count campaign, AWI has helped build a global coalition of like-minded natural fibre organisations, environmental NGOs, manufacturers and brands to engage with EU policymakers in the European Commission, Parliament and Council of the EU to advocate for wool and raise awareness of the shortcomings of PEF.

As part of the campaign, there has been widespread responses from thousands of farmers – as well as researchers, brands and industry – to public consultations regarding PEF. See www.fossilfuelfashioncampaign.com/farmers-letter-eu

"To ensure the wool industry is not disadvantaged, it is critical that AWI continues to advocate so that PEF is not used until it's improved."

John Roberts, AWI CEO

Ecobalyse in France

AWI is also focussing on and addressing alternative rating schemes. For example, France at a national level has been developing its own ratings tool called Ecobalyse, which comes with similar challenges to PEF.

"However, France is more open to methodology improvement that will achieve its policy goals of targeting fast fashion without the inadvertent consequences for wool. AWI has provided robust advice based on science, which is currently being considered by the French for inclusion in their Ecobalyse rating tool. We will continue to work with the French government on improvements to the Ecobalyse tool to ensure it avoids unintended consequences for wool," John said.

More information:

www.makethelabelcount.org



Have you got any interesting photos that you'd like to share with other readers of Beyond the Bale?

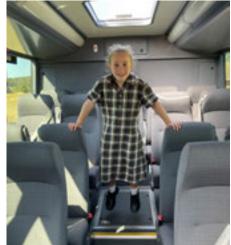
If so, please email the image and a brief description to the editor of Beyond the Bale Richard Smith at richard.smith@wool.com, or you can tag us #beyondthebale on Instagram.

If you email or tag a photo that gets published in Readers' Photos, you'll receive from us a paperback copy of the Kondinin Group's The Story of Wool.

Red dust muster

Ainsley Fuster (@ainsley.young.images), who lives and works at the family property 'Boullia Station' near Broken Hill in outback NSW, took this vivid photo of the red dust during mustering. Ainsley is a photographer of not only the rural lifestyle, but also of the food she bakes as part of her Station Pâtissière business (www.thestationpatissiere.com).





Wool bus seats are no mean feat

Fourth generation woolgrower Rod McErvale of Lexton in western Victoria, who set up Yalong Yarns and knitwear brand Leroy Mac Designs with his wife Rebecca, also owns the local school bus. When it recently had to be replaced, he arranged for the seats in the new bus to upholstered with wool blend fabric using 18.3 micron wool from his own farm. Pictured here is their daughter Isla on the bus at their farm.



Sonny Maywood from Strathlea in Victoria helping out in the sheds during school holidays at Tom Kirk's Bundemar Merino Stud at Baldry in NSW.





Fog lifting in the Flinders

Peter McCallum sent in this photo of his ewes and lambs on a foggy morning at his property at Booleroo Centre in the Southern Flinders region of South Australia.

WoolPoll Your fibre 2024 Your future Your call

Remember to vote in WoolPoll 2024

- Voting is quick and easy
- Voting is open 20 September to 1 November
- See page 4 for more information



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