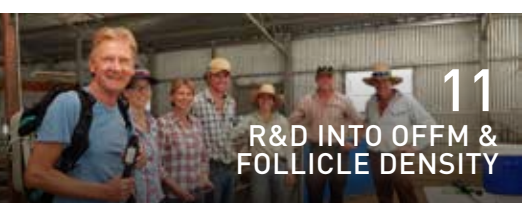


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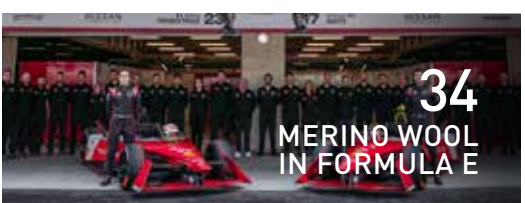


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Beyond the bale

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FRONT COVER

To help alleviate labour shortages in the wool harvesting and broader wool industry, AWI is promoting to young people the wide range of rewarding careers available in the industry. See pages 4-10.

Pictured are wool handlers Alycia Redden and Katrina Whittaker of YP Shearing in South Australia. PHOTO: James Braszell Photography, for Just Shear.



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



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AWI STATE-BASED GROWER NETWORKS

AWI-supported networks are present in each state.

- Sheep Connect NSW
- Sheep Connect SA
- Sheep Connect Tasmania
- BESTWOOL/BESTLAMB (VIC)
- The Sheep's Back (WA)
- Leading Sheep (Qld)

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

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AWI WORKING FOR WOOLGROWERS



John Roberts
Chief 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.

Attracting the next generation into the industry

It has always been important to attract young people into the wool industry, but it is especially critical right now due to the labour shortages across the whole country that are affecting many industries. Shearer and wool handler training is a priority for AWI, but we are also working to attract new workers into the broader wool industry through education initiatives such as the Hay Inc Rural Education Program, the Peter Westblade Scholarship and the Young Farming Champions initiative. Another example is the very successful webinar that we conducted on National Agriculture Day in November, which featured six young professionals promoting the wide range of career opportunities available in the wool industry – see pages 4-5.

Woolgrowers can play their part in helping attract and retain workers in the industry by providing modern, professional and safe working conditions on their properties and in their sheds. Our industry's potential workforce often have many other alternative career options open to them so we must make conditions as attractive as possible to attract and retain them.

Making wool harvesting and sheep work easier

AWI and PIRSA last month held a Shearing & Sheep Handling Innovation & Demonstration Day at Jamestown in South Australia. It gave woolgrowers a chance to see demonstrations of commercially available options for mobile, upright and adaptable wool harvesting alternatives, as well as a range of sheep handling equipment and sheep yards. These are aimed at making wool harvesting and sheep handling easier, safer and more efficient – which helps attract and retain workers in the industry. The Jamestown event followed the successful Wool Harvesting Innovation Demonstration Days held by AWI last year at Conargo in NSW and at Gairdner in WA.

Wool industry collaboration on traceability and sustainability

Leading Australian wool industry service bodies, including AWI, have been undertaking extensive discussions over the past 10 months to develop a framework that will enable the Australian industry to better meet the evolving needs of its global customer base in terms of sustainability and traceability. Additionally, it will assist in addressing the growing threat of an emergency animal disease outbreak.

The key success factor is to work together as an industry and utilise the multiple digital assets that already exist in the industry. These include a combined electronic specification (WoolClip), wool pack traceability software (eBale), the Sheep Sustainability Framework, WoolQ traceability database, National Wool Declaration (NWD), AWTA test and PIC data, and a 'blockchain' traceability platform (Everledger).

The Commonwealth-funded *Traceability in the Australian wool and sheep industry* report commissioned by WoolProducers Australia has helped highlight the importance of traceability and proved useful in discussions between the industry service bodies.

It is also important to acknowledge the solid inroads that have already been made in terms of existing integrity systems available in the marketplace. Any developments stemming from this industry collaboration will be intended to complement and support these systems through enhanced digital validation and reduced administration, rather than compete with them.

In the coming 12 months, industry groups will continue to meet regularly to pool their knowledge to identify how these digital assets can best be integrated to serve industry participants and our global customers. For more information, see wool.com/together.

Economic hangover from COVID starting to ease

Although COVID no longer dominates the headlines, it left a damaging financial legacy, with many of our markets having experienced challenging economic conditions during 2022, made worse by the conflict in Ukraine and rising energy costs. The largest market for Australian wool, China, has had its own COVID issues, with its strict COVID suppression measures having caused logistic issues as well as a dampening of domestic consumer spending during 2022. All these issues unfortunately affected the price that woolgrowers received for their wool.

Lower than forecast prices have also impacted AWI finances, as well as woolgrower finances, because AWI's revenue is to a large extent dependent on income from the wool levy. Lower revenue affects the amount that we can invest on behalf of woolgrowers in R&D and marketing projects to address the challenges and many opportunities that the wool industry faces.

However, in good news, 2023 has started brighter. There are forecasts of more positive global economic conditions – and the relaxing of COVID-related lockdowns in China has laid a good foundation, with consumer confidence and market growth expected to improve significantly in the country during this year. Previous logistic issues that had been hindering processing/manufacturing and shipping have also diminished. Importantly, the EMI has started strongly which is encouraging and hopefully a positive sign going forward.

WOOL CAREERS PROMOTED IN AGDAY WEBINAR

Young people from across the country tuned in to an AWI webinar in November to hear from six inspirational young people about their careers in the wool industry.

Held on National Agriculture Day on 18 November, the AWI webinar featured six young professionals promoting the wide range of career opportunities available in Australia's wool industry.

The webinar included a live cross to a working shearing shed in South Australia so viewers could see sheep shearing, wool handling and classing.

The hour-long webinar was an interactive session with viewers able to ask questions for the six panel members to answer live. Many school classes tuned in to the webinar.

This article provides small excerpts from the webinar.

More information: View a recording of the webinar at www.youtube.com/AWIWoolProduction

Dione Howard

NSW Local Land Services District Veterinarian, based in Wagga Wagga

Dione Howard's journey in the wool industry began as the sixth generation on her family's Merino property near Lockhart in the Riverina of NSW. She studied veterinary science at

Charles Sturt University and has been a District Veterinarian for NSW Local Land Services for the past 4½ years. She is Agricultural Shows Australia 2022 National Rural Ambassador, and an Action4Agriculture Board Member and Young Farming Champion.

"I work as a veterinarian predominantly with sheep and I'm based in the Riverina area of NSW. I work with farmers every day to make sure that their sheep are healthy so that they grow high quality wool. I do farm visits to undertake disease investigations and I also attend visits to the sale yards at Wagga which has up to 80,000 sheep each week," Dione said.

"I grew up on a farm and love working with livestock. I studied agriculture as a subject in the HSC in year 12, and all the way through high school. I absolutely loved agriculture and science subjects so that encouraged me to study veterinary science at university. I went on to Charles Sturt University in Wagga; it's a six-year course and you get to study all different species but there is a livestock focus.

"You can become a vet whatever your background, whether you grew up on the coast or in the city. People from all across Australia came to study vet science at Charles Sturt

University where we all got the same skill set and have the same passion for keeping animals fit and healthy.

"Every day I get to work with farmers and my favourite species, which is sheep. I've been working as a veterinarian very close to the town where I grew up so I'm lucky to get to work quite often with people that I already know."

Danila Marini

Livestock researcher at the University of Adelaide

Originally a city kid, Danila hadn't been near anything remotely like a farm until about nine years of age, but always had a passion for animals. Danila studied animal science at the University of Adelaide and did a PhD at the University of New England. Danila has worked for CSIRO, and has been a researcher at the University of Adelaide for the past 10 months. Danila is also a Young Farming Champion.

"I've always loved animals but when I was younger I didn't know exactly what career I wanted – maybe a vet, zoo keeper, or farmer. It wasn't until I had a look at Adelaide University's Roseworthy Campus and was exposed to livestock and research that I really had my



Dione Howard
NSW Local Land Services District Veterinarian



Danila Marini
Livestock researcher

interests piqued," Danila said.

"Being interested in research, I went straight from my degree into an Honours degree, which is basically like dipping your toes into research. You get to run your own little research project for about a year and you get to write it up, exactly how a scientist would run a normal experiment. I got to investigate the stress response of lambs that had been through a difficult pregnancy and how they could cope in the environment. That sparked my love for sheep. Working with them for nine months straight was absolutely fantastic.

"I went on to do a PhD with CSIRO at the University of New England in NSW, looking at self-medication mainly in sheep. That was a lot of fun and it led me down the path of working on animal behaviour and welfare.

"I now specialise in sheep. Most of my work currently is looking at ways that we can help farmers improve the welfare of sheep so they stay healthy and happy. That could be through finding new pain relief drugs and ways to provide them, or ensuring that technology such as virtual fencing doesn't negatively impact their animals."

Chloe Dutschke

Career development officer for AgCAREERSTART, based near Hay in NSW

Originally from the Clare Valley in South Australia, Chloe really wanted to work in a career related to animals. She studied animal science at the University of Adelaide and now works for a National Farmers Federation gap-year program called AgCAREERSTART, a 10-12 month program that helps to kick-start careers in farming. Chloe is a Young Farming Champion and a committee member of the Peter Westblade Scholarship and the Hay Inc Rural Education Program.

"I didn't have a background in agriculture, I didn't grow up on a farm. We lived on a little

hobby block, but I really wanted to work in a field that I could work with animals," Chloe said.

"Originally I thought I wanted to be a veterinarian or work in the wildlife field but, after I did some work experience and studies, that didn't seem to fit with where I wanted to go. I started to see more opportunities in the livestock sector so as I moved through my university degree I took lots of different opportunities to learn.

"After university, I got a job as a jillaroo on a sheep station in the Flinders Ranges in South Australia. I worked there for two years which was a fantastic opportunity – it was a lot of fun. I then went contract mustering on properties in South Australia and NSW for about three years – I saw some wonderful scenery, met some really wonderful farmers and got to learn lots of new tools and tricks of the trade.

"In 2020 I took a position as senior station hand on a property in Hay and that's where I currently am. I really want to encourage more young people into agriculture, so at the start of 2022 I began a position with the AgCAREERSTART gap year program where we place young people aged 17-25 looking to go into agricultural roles; we match them with farmers that are looking for employees. You get a full-time job, you get a wage and through the program you're also getting a training and engagement bursary. Check out agcareerstart.com.au for details."

Lochie Reichelt

Shearer

"I was 19 when I started shearing. This will be my fifth year in the industry and I'm definitely planning on staying in the industry. You kind of fall in love with it and keep doing it. I like the atmosphere in the workplace, how rewarding it feels after a good day in the shed. You meet

some good people and learn life skills along the way which is awesome," Lochie said.

"I'm always open to learning. I've been to several shearing schools and workshops with some top-class trainers, which has really helped me learn a lot. I currently shear an average of about 200 sheep per day, which earns me about \$800 each day."

Sarah Haynes

Wool handler and classer

"I've been a wool handler for three years and classing for about seven months. I love everything about my job. I love wool and I love the sheep. I like how it's a bit of a competition every day with yourself, keeping up with the shearers, it's a fast-paced job and you get rewarded for it. It's a really good gap year job because it's a lot of money in a short amount of time. There are a lot of career pathways," Sarah said.

"You can travel almost anywhere in Australia and around the world. Shearers get paid per sheep so the faster they work the more money they earn; they can kind of be their own boss in a way. It's quite motivating to know that you can earn more as your skills build up."

Annabelle Haynes

Wool handler and videographer

"I've been working in the wool industry on and off for about eight years now. I started with my gap year, just to save up a bit of money and to travel around before I went to university," Annabelle said.

"It was a great opportunity to work all across Australia and meet a heap of people and learn a lot of skills, about being independent and living on your own and all that kind of thing. I had a really great experience. I love the job."



Chloe Dutschke
Career development officer for AgCAREERSTART



Lochie Reichelt, shearer; Sarah Haynes, wool handler and classer; Annabelle Haynes, wool handler and videographer.

SHEARER AND WOOL HANDLER TRAINING COURSES

AWI funds training to attract and retain new entrants into the wool harvesting industry, build the capacity and longevity of existing staff, and increase returns to woolgrowers through improved clip preparation practices.

AWI regularly funds and supports hands-on practical in-shed training for shearers and wool handlers to attract and retain new workers, as well as increase workers' productivity, skills and professionalism.

There has been a concerted effort to run extra novice and improver training, funded by AWI and several state governments.

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.

In Victoria and South Australia, the training is provided by the Shearing Contractors Association of Australia Shearer Woolhandler Training Inc (SCAA SWTI).

All the training aligns with nationally recognised qualifications and are designed to meet industry standards and needs.

Opposite is a list of training currently scheduled nationwide for 2023 – more is planned. Programs are subject to change without notice. Keep an eye on the Facebook channels of @australianwoolinnovation and @shearerwoolhandlertraining (Vic and SA) for the latest updates.



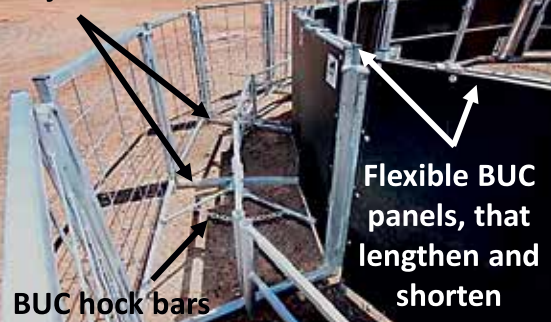
An AWI-funded shearing and wool handling course held in November at Rylington Park, Boyup Brook, WA



Back Up Charlie – Flexible Sheep Movement System



Adjustable race width



BUC hock bars

Flexible BUC panels, that lengthen and shorten



New strap panels

What is Back Up Charlie?
Back Up Charlie is a flexible dual lane lead up race for sheep handling applications requiring consistent forward flow of sheep.

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Back Up Charlie W: www.backupcharlie.com.au M: 0428 271 518 E: info@backupcharlie.com.au

NEW SOUTH WALES

January to June 2023 – dates and locations for the latter six months of the calendar year are still being finalised.

Contact pauline.smith@tafensw.edu.au for details about the TAFE courses.

Contact craig.french@wool.com for details about the other NSW courses.

WALBUNDRIE	9–20 January	Novice
BOOKHAM	16–20 January	Novice
YOUNG	13–17 February	Novice
ARMIDALE	13–17 February	Novice stage 1 - TAFE
DUBBO	13–17 February	Novice stage 1 - TAFE
CANOWINDRA	20–24 February	Novice
DUBBO	27 February – 3 March	Novice stage 2 - TAFE
CANOWINDRA	27 February – 3 March	Improver
WARREN	20–24 March	Novice
DUBBO	20–24 March	Improver - TAFE
STEAM PLAINS	20–31 March	Novice
INVERELL	27 March – 1 April	Novice - TAFE
DAYS DALE	26–29 April	Improver
DUBBO	1–5 May	Novice stage 1 - TAFE
ARMIDALE	1–5 May	Novice stage 1 - TAFE
WALBUNDRIE	1–5 May	Improver
COOMA	8–12 May	Novice
ARMIDALE	8–12 May	Novice stage 2 - TAFE
DUBBO	8–12 May	Novice stage 2 - TAFE
COOMA	15–19 May	Novice
GLEN INNES	22–26 May	Novice - TAFE
IVANHOE	1–12 May	Novice
DUBBO	5–9 June	Improver - TAFE

VICTORIA

Contact the SCAA SWTI on 1300 787 984 or admin@swti.edu.au for details.

BALMORAL	16–20 January	Novice
MORTLAKE	16–27 January	Improver
GYMBOWEN	30 January – 3 February	Novice
MORTLAKE	30 January – 10 February	Improver
BENDIGO	13–17 February	Novice
DOOKIE	6–10 March	Novice
DOOKIE	20–24 March	Improver
HAMILTON	17–21 April	Novice
BALLARAT	8–12 May	Novice
INGLEWOOD	5–9 June	Improver
MANANGATANG	3–7 July	Novice
OMEQ	17–21 July	Novice
TELOPEA DOWNS	17–21 July	Improver
WYCHEPROOF	7–11 August	Novice
WEDDERBURN	11–15 September	Novice
PENSHURST	16–20 October	Novice
BAIRNSDALE	6–11 November	Novice
NATHALIA	13–17 November	Novice

QUEENSLAND

Contact craig.french@wool.com for details.

TAMBO	20–24 March	Novice wool harvesting
BARCALDINE	27–31 March	Novice wool harvesting
BARCALDINE	3–6 April	Improver shearing

SOUTH AUSTRALIA

Contact Josh Sneath on 0419 176 750 or email lselig@swti.edu.au for details.

KONETTA	30 January – 10 February	Improver
WILLALOOKA	6–10 February	Novice
KONETTA	13–24 February	Improver
MARRABEL	20–24 February	Novice
PANDURRA	6–17 March	Improver
PINNAROO	20–24 March	Novice
HOLLOWILIENA	20–24 March	Improver
LANGHORNE CREEK	27–31 March	Novice
SHERINGA	27–31 March	Improver
CUMMINS	1–5 May	Novice
TEETULPA	8–26 May	Improver
OAKDEN HILLS	15 May – 2 June	Improver
JAMESTOWN	5–9 June	Novice
STREAKY BAY	26–30 June	Novice
WILLALOOKA	3–7 July	Novice
KAROONDA	7–11 August	Novice
YORKE PENINSULA	12–16 September	Novice
ROSEWORTHY CAMPUS	25–29 September	Novice
FURNER	23–27 October	Novice
PARNDANA KI	4–8 December	Novice

WESTERN AUSTRALIA

Specific dates in each indicated month are still being finalised.

Contact nextgen3@wool.com for details.

BOYUP BROOK	January	Novice
ESPERANCE	February	Improver
ESPERANCE	February	Wool handling workshop
BOYUP BROOK	February	Novice
MURESK	March	Crutching work-shop
DARKAN	April	Improver
DARKAN	April	Wool handling workshop
BOYUP BROOK	May	Novice
MURESK	June	Novice
ESPERANCE	June	Novice
BADGINGARRA	July	Novice
BADGINGARRA	August	Improver
BOYUP BROOK	October	Novice
BOYUP BROOK	November	Novice
BOYUP BROOK	December	Improver
BOYUP BROOK	December	Wool handling workshop

TASMANIA

Specific dates in each indicated month are still being finalised.

Contact nextgen2@wool.com for details.

FINGAL VALLEY	May	Novice
CENTRAL HIGH-LANDS	September	Novice
DERWENT VALLEY	November	Novice
NORTHERN MIDLANDS	April	Wool handling workshop

FUTURE FEMALE LEADERS IN WOOL HARVESTING

Young women are now not only commonplace in shearing sheds, but the girls are also showing that by using best practice techniques they can more than match the boys. Here we feature four young female professionals that won titles at the AWI-supported 2022 Australian Shearing and Wool Handling Championships held in Bendigo in November.

Ella Picker, NSW

2022 National Novice Shearing Champion

Ella was brought up on the Picker family's 'Hillcreston' property at Bigga in NSW which specialises in the growing and breeding of Merino ultrafine and superfine wool. Now 25, Ella has been working at Hillcreston full time for six years now.

"I started to shear by asking my brother Sam to teach me. He has always inspired me and pushed me to do my best. He suggested I go to an AWI-funded shearer training course at 'Steam Plains' north of Conargo, which I did and, afterwards, Sam has continued helping me," Ella said.

"I love shearing because you can work at your own pace. It is so challenging in that you are always trying to get better and learn new things. I also really enjoy the physical side and pushing myself harder.

"It's incredible to see how many females are taking up work in the shed nowadays. It is absolutely awesome."

Ella won several novice shearing competitions before she won the big one at Bendigo in November.

"My brother has been super successful in competitions representing NSW a few times, so I tagged along with him to the Wellington Show, and then the Dubbo Show where I made the NSW team. I've done seven shows all up now," she said.

"The highlights are meeting some of the best shearers in Australia and making so many new connections. Another is having Sam and Scott Madden in my pen pushing me to do my best because they've taught me so much."

Ella has done two days shearing on the AWI sheep delivery unit, in which the sheep are delivered along a race almost directly to the shearer, virtually eliminating the catch and drag.

"I personally really like it. With me being so much smaller than the typical shearer and shearing heavy sheep, it really makes a difference on my body. Both days I was there, the sheep ran through the race really easily," she said.

Danielle Mauger, WA

2022 National Intermediate Shearing Champion

Following in the footsteps of her father, 24-year-old Danielle Mauger from South West WA is an established shearer in the Boyup Brook area and is also proving to be a skilled competitor. After winning a string of intermediate shearing competitions in her home state, she is now the National Intermediate Shearing Champion.

Although Danielle started competing in shearing competitions when she was at the WA College of Agriculture Harvey, shearing has always been in her blood. She grew up on an 80-hectare sheep farm at Balingup run by her parents Linda and Ross who is a semi-retired shearer.

Danielle, who received AWI-funded training at the start of her career, began shearing full time when she was 19 and currently works for a local contractor, Shear Pride.

"I love the freedom of shearing, how you can push yourself as much as you want. I also like the people; everyone has a different story and there are so many different personalities in



Ella Picker working in the shed (left) and having won the 2022 National Novice Shearing title in Bendigo in November (right).

the industry. I've never had a job that's had the same camaraderie or atmosphere. It's fast paced and intense but there's always lots of banter as well," she said.

Although Danielle acknowledges that shearing is hard work and puts a lot of strain on the body, it is definitely a job that she recommends.

"I think people that like hard work, working in a team and that like a challenge would like the shearing industry," she said.

With shearer trainers focussing on shearing technique and balance rather than brute strength, there are an increasing number of women willing to pick up a handpiece and join the shearing industry.

"From what I've seen there are definitely more females that are keen to learn how to shear, and slowly more that want to actually take it on as a job," Danielle said.

Sarah Haynes, SA

2022 National Senior Wool Handling Champion

Sarah, from Naracoorte in South Australia, recently turned 21 and has been working in the industry for the past three years. She began wool handling in her school holidays, as her father is a shearer, and then started wool handling full time when she finished high school. "I just fell in love with it," Sarah said.

She has received an extensive amount of training and mentoring, with Kursha Oster and Ali Tuinder helping to guide her since her first shed wool handling.

"Seeing how passionate the trainers are is what sparked my love for wool handling, I am extremely grateful for all of the training I've received to this day. The training has helped me immensely, teaching me to work more efficiently and perfecting skills," she said.

To have a better understanding of wool, Sarah did a Certificate IV in Wool Classing with SCAA Shearer Woolhandler Training Inc in 2021/2022.

Like Abbey Curnow (see next page), Sarah was chosen as an SCAA Shearer Woolhandler Training Inc's Woolclasser Ambassador and went on to demonstrate her all-round ability by winning the 2022 AWEX/TAFE National Graduate Wool Classer Competition, held in April at the Sydney Royal Easter Show.

In only her second show competing in wool handling, the 21-year-old won the 2022 National Senior Wool Handling title at Bendigo in November. Her goal is now to represent her state in the open wool handling competition.

These two big competition wins, and receiving an Elders Clip of the Month award for her first big clip of 655 bales, are career highlights for her so far. However, Sarah says more than anything she simply just loves her day-to-day job in the wool shed.

"I absolutely love working in the wool industry. I am very passionate about wool handling and it gives me the freedom to travel all across Australia and the world, meet new people, stay fit and earn good money. I would highly recommend a career in the shearing industry!"



Danielle Mauger learning best practice technique at an AWI-funded novice training course five years ago (left) and winning the 2022 National Intermediate Shearing title in Bendigo in November (right).



Sarah Haynes in action at the 2022 National Senior Wool Handling at Bendigo (left) and with her winner's sash (right).

< ARTICLE CONTINUED FROM THE PREVIOUS PAGE

Abbey Curnow, Vic

2022 National Novice Wool Handling Champion

Brought up on the family farm at Laancoorie, west of Bendigo in Victoria, Abbey Curnow started as wool handler in shearing sheds when finishing school three years ago.

"After I left school, Adam Webb gave me a job on his team North Central Shearing Bendigo and I fell in love with the job," Abbey said.

"After wool handling for about a year, I decided to take a 12-month wool classing course, through SCAA Shearer Woolhandler Training Inc. I was lucky enough to be taught by Marion Kelly and I also learnt a lot from my dad, who is a classer, and I had a lot of help from the amazing classers I work with at North Central Shearing Bendigo."

Abbey received her stencil in May last year and classed her first clip at the family farm 'Rosevenue' the following month.



Abbey Curnow working the sheds of central Victoria (left) and with her winning 2022 National Novice Wool Handling sash at Bendigo in November (right)

"Although as a job I mainly do classing, I still enjoy wool handling and being able to run around the board with my broom."

Abbey was chosen as SCAA Shearer Woolhandler Training Inc's Woolclasser Ambassador for her excellent workmanship, top attitude, and ability to work well in a team. As a Woolclasser Ambassador, she received sponsorship from AWI, Heiniger and Australian activewear brand ioMerino.

"I 100% recommend this job to anyone. The people I get to work with are what make this job so amazing. Plus, you are always staying active and fit, have the ability to travel, and make good money," she said.

"Some of my goals are to travel all around the country classing and woolhandling, and eventually take up a bit of shearing – I'd love to shear my 100 one day."



Trail blazing shearer Cathy Wendelborn



Cathy Wendelborn and Chairman of Shear Outback Sam Barnes.

Shearing legend Cathy Wendelborn from Quilpie in Queensland was inducted into the Australian Shearers Hall of Fame in April last year. She is the first woman to receive the honour.

Cathy originally hails from South Australia and began shearing in 1982, blazing a trail for women shearers. She travelled widely, shearing across Australia and New Zealand as well as being very involved in the competitive shearing world.

Cathy said it is great to now see a lot more women involved in wool harvesting, both in the sheds and competitively.



Hear from Cathy in Episode 237 of AWI's The Yarn podcast at wool.com/podcast.

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R&D UPDATE INTO SIMPLE OFFM – AND FOLLICLE DENSITY

An AWI-funded project to develop a simple device for on-farm fibre measurement (OFFM) is in the final stages of R&D, and in January the project was extended to include follicle density.



Initial follicle density measurements directly on the skin of the sheep.



The Zondii research team and Smith family at Glenwood Merinos.

AWI teamed up with Australian start-up company Zondii in 2022 to investigate whether the company's patented Artificial Intelligence and imaging technology can be used to successfully measure wool's micron, and potentially colour and crimp.

Results received in January 2023 confirmed the ability of a hand-held device to measure wool micron and colour, with further work progressing on the feasibility of measuring crimp. An additional smartphone solution is also in the final stages of R&D with updates to be provided in the coming months.

"It has been incredibly exciting to have reached a stage where we are using our solution alongside existing industry wool measurement tools, to validate the accuracy and speed of the new technology," said Zondii Founder, Danielle Morton.

Zondii has also commenced R&D into follicle density measurement, using a hand-held device, in real time, on farm. The measurement campaign was successfully undertaken in the last week of January, at 'Glenwood' near Wellington in NSW. AWI and the Zondii team extend their thanks to the Smith family for making the testing possible. Results for this R&D will take several months, as the team waits for the turnaround required for follicle density comparison tests.

"Follicle density is important because woolgrowers who select sheep with greater wool follicle density can improve both the quantity and quality of the wool in their flock. At present, although wool follicle density can be measured using 'histology', few woolgrowers find this process to be either economically or logistically viable," said AWI Program Manager Agri-Technology, Carolina Diaz.

"It is anticipated that the availability of a more affordable and easier to access solution to on-farm fibre measurement would encourage more woolgrowers to use it and enable those already using it to test more of their flock than present."

The Zondii team are continuing to speak with woolgrowers across the country to determine if the technology will be a good fit for their farms, with further on-farm trials continuing over the coming months. To become an early adopter and join the Zondii wool waitlist, scan the QR code or visit www.zondii.com/agritech-wool



Write off the full cost of eligible assets with temporary full expensing* before it ends on 30th June 2023.

*Speak to a qualified accountant to find out how this would apply to your business.

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WET SEASON WORM WOES CONTINUE

PHOTO: Chris Gordon

Whilst the La Niña may have run its course, wet season worm woes continue in many regions. The drier conditions for many will mean that gaining the upper hand on the worms that are in paddocks and inside sheep will be a little less complex, however the risks remain, and vigilance will be essential for staying ahead of the worms and getting back on top of them if they have become out of control.

Internal parasites are a massive cost to the industry, through both production losses, and the cost of control. Therefore, effective management, preventative strategies and effective control are key to minimising on-farm impacts.

For areas that have experienced flooding, there are no rules of thumb regarding the life span of worm larvae on flood inundated pasture. Testing is the key to building knowledge that will assist with decision making post flood.

A well thought out, planned and comprehensive campaign will be the best strategy for winning the war on worms. This will involve using as many of the tools available to gain the upper hand on the tricky parasites.

An integrated parasite management plan involves consideration of a number of factors:

- **Which worms are inside the sheep (and how many):** Know your enemy!
- **What worms are on the pasture:** Think about pasture contamination, and how your pasture management can help decrease the pressure that contaminated pastures are placing back on your production – what spelling length do you need for your lambing ewes this Autumn?
- **What stage of management the animals are up to in the production cycle:** Which ones are the most and least susceptible – think pre-lambing ewes, weaners being very susceptible, dry ewes less so.
- **Test – don't guess!** Your worm egg counts are a key tool in the war on worms – do

not underestimate their power to give you crucial information.

As many autumn lambing flocks approach lambing, woolgrowers will need to step up monitoring programs, and their pasture management and preparation should be well and truly under way. Timely spelling of lambing paddocks will help set the lambing up to be less pressured by internal parasite burden from the paddock. Use the opportunity to increase your knowledge of estimated longevity of worm larvae on pastures at different temperatures. This knowledge will help refine spelling periods to minimise the worm loading in pastures. This information is available on the WormBoss website (wormboss.com.au >> Prevent >> Grazing management – Sheep).

This leaves the sheep worm environment to take care of. Testing and using thresholds that are applicable for the age and status of the sheep in the production cycle are essential to ensure minimal pick up of worms from pasture. Using cattle if available may also help with cleaning up of paddocks.

Once a worm test result has been returned – and you know the number of worms in the sample (measured as eggs per gram or epg) – knowledge of which worms are present (or not) is key to making an appropriate choice of product to drench with. A larval culture will help you understand which worms you are dealing with. Remember: Barbers pole, black scour and brown stomach worm eggs all look the same under a microscope, so culturing them to hatch is the only way to know for sure which worms are present. Do not make

assumptions of what's present – those rules of thumb will increase your risk of ineffective management, or unnecessary expense.

Use of the ParaBoss Drench Decision Guide (paraboss.com.au >> Tools >> Drench Decision Guides) will help decide when to drench or when not to drench. These guides have been developed by technical experts and apply to different areas. Your local advisor will also be key to implementing an effective control strategy.

Best practice drenching

Best practice drenching starts with the planning

Testing and knowing which parasites are targeted is the first step.

Selection of the correct product for the job

Don't use products that target worms that you do not have. Some actives are effective on some worms and not others; know which ones these are and use them for the worm species present. Combination drenches that contain a mixture of actives are considered best practice. Use the ParaBoss Product Search Tool (paraboss.com.au >> Tools >> Product Search) to help understand the range of products that target the worm species present. This tool will also allow consideration to be given to the Withholding Period and Export Slaughter Interval (WHP and ESI) of the products.

Calibrate your drench gun

Take the time to check the calibration, and ensure your equipment is in good working order.

Right dose rate

Whilst it sounds simple, estimation of weight is often a significant source of both underdosing or overdosing at drenching time. Weigh a sample of animals and dose to the heaviest in the mob. If there is a large variation in weight, it may be preferable to weigh and draft into heavy and light to ensure that dose rates are correct. Remember, underdosing will help speed up the development of drench resistance. Overdosing costs money, and in some cases, depending on the class of stock and active, may cause toxicity to the sheep and this may lead to residue in meat or milk.

Read the label and adhere to the WHP and ESI

These are in place to ensure that food safety is maintained. Product labels are easily found on the Product Search Tool on the ParaBoss website (paraboss.com.au >> Tools >> Product Search).

Buying in stock? – Don't buy in someone else's worm problems!

All farms should have a biosecurity plan in place that helps protect the farm from introducing parasites or disease. When purchasing stock from anywhere, they should be treated with a quarantine drench upon arrival. If they have come a long distance, they

may need to remain in a yard, and fed/watered to allow them to fill up and recover from the trip prior to treatment. Read the direction of the products that will be used for the quarantine drench before administering – do the stock need to be off feed for a period or full? Keep the introduced stock in a containment paddock for a few days to allow them to be free of worms before they are released to pasture.

Consider unfamiliar parasites in this space

For example, are the introductions coming from a barber's pole worm area, or a liver fluke area, or a black scour worm area? Do you have problems with any of these?

Quarantine drenches should contain four actives

This includes one of the newer products (monepantel or derquantel). This may seem extreme, but some pre-emptive treatment at introduction may prevent long term parasite induced headaches later on.

Follow up with a drench check test

Take the time to check how well your drench has worked by testing 10 to 14 days after treatment. A drench is considered to be effective if it takes out greater than 95% of the worms in the sheep. If you suspect emerging or established drench resistance, then it is time to undertake a drench resistance testing program (or faecal egg count reduction test FECRT). These tests will help you work out which activities are effective on the farm.

There are no shortcuts in effective internal parasite management. Use the ParaBoss tools to help you manage what can be a complicated and important issue.

More information:

- **Product Search Tool:** paraboss.com.au >> Tools >> Product Search
- **Drench Decision Guides:** paraboss.com.au >> Tools >> Drench Decision Guides
- **Combination-Drench Efficacy Calculator:** paraboss.com.au >> Tools >> Drench Efficacy Calculator
- **How to perform a quarantine drench:** wormboss.com.au >> Prevent >> How can drench-resistant worms be kept out of your property? – Sheep
- **Preparing low worm-risk paddocks:** wormboss.com.au >> Prevent >> Preparing low worm-risk paddocks
- **Grazing management:** wormboss.com.au >> Prevent >> Grazing management – Sheep
- **Worm egg counts:** wormboss.com.au >> Test >> Worm egg counting
- **Conducting a drench test:** wormboss.com.au >> Test >> DrenchTest: drench efficacy



Tap into best practice parasite management

www.paraboss.com.au

Collectively, the three Boss websites – **WormBoss, FlyBoss and LiceBoss** – promote best practice for the management of sheep parasites at the farm level, developed by a community of veterinary experts and parasitologists from across Australia and supported by the sheep industry.

Subscribe to the **FREE** Boss Bulletin e-newsletter from ParaBoss for monthly updates and articles. Subscribe at www.paraboss.com.au/register and follow us on Facebook at facebook.com/paraboss.com.au

Sheep producers are also urged to seek out and use:



ParaBoss-certified advisors: These advisors have completed the ParaBoss Certificate in Sheep Parasite Management and therefore have the skills and knowledge to apply, and provide advice to others about, effective integrated parasite management of sheep. The advisors are listed under the 'Find an advisor' tab on the ParaBoss website www.paraboss.com.au



ParaBoss-certified WEC QA service providers: These providers have demonstrated the accuracy and precision of their WEC services through the ParaBoss WEC QA program, so producers can be certain their worm control decisions are based on accurate results. A list of providers is available under the 'Find an advisor' tab on the ParaBoss website www.paraboss.com.au

NEW SURVEY REVEALS THE SHEEP HUSBANDRY PRACTICES IN THE AUSTRALIAN MERINO WOOL INDUSTRY

What percentage of Australian Merino producers undertook mulesing, tail docking and castration in 2021? And what level of pain management was provided? Read on for an overview of the results from the latest AWI Merino Husbandry Practices Survey.

About the survey

AWI relies on woolgrower surveys to track the Australian wool industry's progress against key sustainability priorities. The results from the surveys help guide and monitor AWI's investment in extension to woolgrowers as well as provide transparency to woolgrowers and international markets of Australian wool.

AWI, in collaboration with Meat & Livestock Australia (MLA), last year commissioned a national survey of 2,003 Australian sheep producers (1,203 Merino and 800 non-Merino producers). The top-level results have been reported in the Sheep Sustainability Framework.

The Merino specific results from the sheep industry survey are reported separately as the 2021 AWI Merino Husbandry Practices Survey. The survey of 1,203 Merino producers, sourced from MLA's member database, was conducted online and by telephone from May to July 2022; the respondents were asked about their 2021 practices. Woolgrowers were targeted from a range of demographics, including location and flock size.

This latest survey is an update to the similar 2017 AWI Merino Husbandry Practices Survey that also included 1,200 respondents across Australia. This enables the tracking of changes in Merino producers' husbandry practices – such as mulesing, tail docking and castration – over that time.

Mulesing

Mulesing rates are in decline

The results of the 2021 AWI Merino Husbandry Practices Survey indicate a decrease in the percentage of woolgrowers who mules their lambs since the prior survey of practices in 2019 (reported in the 2020 AWI Wool Industry

Profile). The percentage of respondents that mulesed their ewe lambs fell from 63% in 2019 to 52% in 2021, while respondents that mulesed their male lambs fell from 54% to 44%. The trend is especially apparent among woolgrowers with smaller flock sizes of between 100 to 499 sheep.

84% of the Merino producers who did not mules

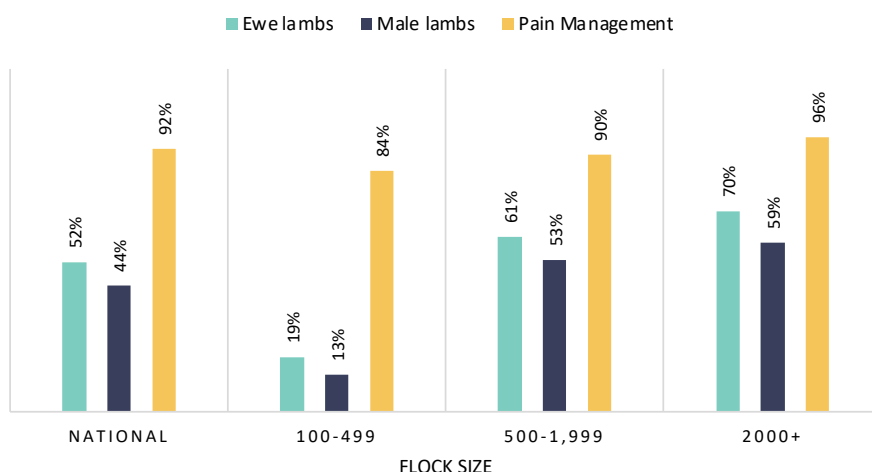
ceased mulesing in the past 16 years, with 50% ceasing in the past six years. They reported the main reason they had stopped mulesing was because they had bred sheep with less body wrinkle (39%). Breeding naturally flystrike resistant sheep can take from five years to several decades and this survey data suggests that woolgrowers are seeing their breeding programs coming to fruition, giving them the confidence to cease mulesing.

Around 20% of woolgrowers who mules, said they are likely or very likely to cease mulesing in the next five years.

Those with larger flock sizes were significantly more unlikely or very unlikely to cease mulesing in the next five years (flock size 500-1999: 57% and flock size 2000+: 65%).

If mulesing was no longer an option, 47% of these respondents (who could give more than one option) said they would rely more on flystrike chemicals for prevention or treatment, 45% would increase crutching frequency, 41% would breed sheep more resistant to flystrike, and about 23% would move to another enterprise.

Figure 1: Respondents who mulesed ewe lambs and male lambs, and use of pain management for mulesing in 2021



Why the survey results differ from National Wool Declaration data

The number or percentage of woolgrowers who mules, as estimated by woolgrower surveys, contrasts with the proportion of mulesed and non-mulesed bales of wool, as declared by vendors through the National Wool Declaration (NWD).

While both measures are indicating an increasing trend in the production of non-mulesed wool, the figures cannot be directly compared.

The NWD reports the *percentage of bales* of wool sold through the Australian Wool Exchange (AWEX), whilst woolgrower surveys report on *woolgrower practices*. As larger woolgrowers are significantly more likely to mules their lambs, they have a disproportionate effect on the number of mulesed wool bales sold through AWEX which is reflected in the higher proportion of mulesed wool bales offered for sale.

Once a woolgrower stops mulesing, it can take up to 7 or 8 years for all mulesed animals to leave the property, so there will always be a lag, especially for woolgrowers who run their ewes in mixed aged mobs.

The NWD data is for wool sold at auction and does not include direct sales.

Woolgrowers with small numbers of bales mules less, but they also use the NWD less than larger woolgrowers.

Analysis between the NWD and survey results continue.

Almost all woolgrowers used pain management for mulesing

92% of respondents that mulesed in the 2021 AWI Merino Husbandry Practices Survey used pain management at mulesing (see Figure 1).

The anaesthetic and antiseptic spray Tri-Solfen® was used in 96% of cases, with only small percentages using the longer term analgesic injections (4%) or oral gel (5%). 8% of respondents used a combination of a longer acting analgesic with TriSolfen®, which is the best practice for pain management at mulesing.

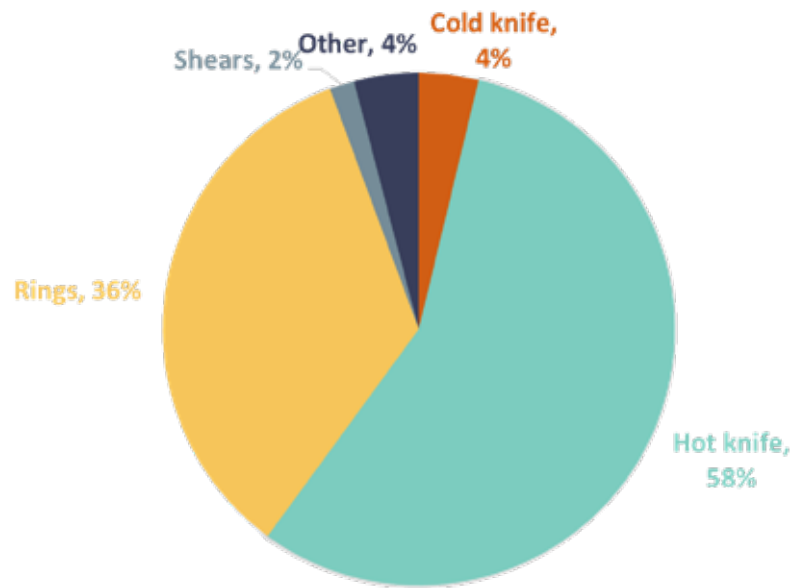
Tail docking

Which tail length is best?

Almost all respondents in the 2021 AWI Merino Husbandry Practices Survey tail docked their ewe lambs (95%) and male lambs (97%). Hot knife was the most used method of tail docking (58%) followed by rings (36%) – see Figure 2.

This was similar to the 2020 AWI Wool Industry Profile survey that reported 54% of woolgrowers used hot/gas knife to tail dock in 2019, while 28% used rings. However, the 2021 result for hot knife (58%) is lower than that reported in the 2017 AWI Merino Husbandry Practices Survey (68%) and higher for rings in 2021 (36%) compared to 2017 (27%), indicating an increasing trend towards the use of rings for tail docking in recent years.

Figure 2: Respondents using tail docking in 2021, by method



Which tail length is best?

Recommended best practice is to dock tails at 3 or 4 joints. About half of respondents in the 2021 AWI Merino Husbandry Practices Survey reported docking tails at 2 joints (51% ewe lambs, 55% male lambs) and about a third report docking at the recommended 3 joints (37% ewe lambs, 32% male lambs). Very few docked at 1 joint (6% ewe lambs, 7% male lambs) or 4 joints (3% both ewe and male lambs). These results are slightly different to those reported in the 2017 AWI Merino Husbandry Practices Survey where 48% docked to 3 joints and 39% docked to 2 joints.

Adverse outcomes for docking tails too short include increased predisposition to rectal prolapse, increased skin cancers of the perineal region, increased risk of bacterial arthritis and increased risk of breech strike as the animal cannot raise its tail to defecate or flick flies away (read more about the recommended tail docking length on pages 17).

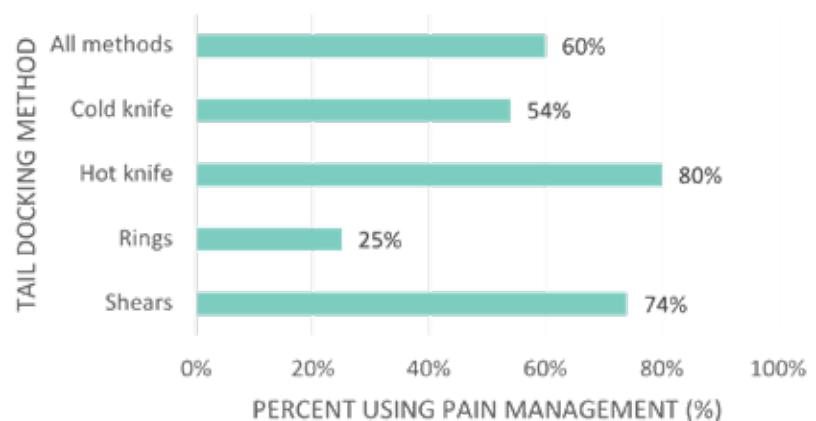
Choose the pain management product carefully

Nearly two-thirds of respondents reported using pain management in lambs at tail docking (60%) – see Figure 3. Tri-Solfen® was the most commonly used pain management product for tail docking (84%), followed by Buccalgesic® (10%), Meloxicam (7%) and Numnuts® (6%). Those using the hot knife method to tail dock were significantly more likely to use pain management (80%) and those using rings were significantly less likely to use pain management at tail docking (25%).

There is some confusion among woolgrowers as to which pain management products are suitable for different methods of tail docking. Those using hot knife, cold knife or shears almost always used a suitable pain management product. However, of those who used rings, 57% used an unsuitable product for that method of tail docking.

That percentage rose to 89-93% for those who used rings for tail docking and mulesed their lambs; however, the numbers using rings and mulesing were very low (ewe lambs: 13% and

Figure 3: Respondents using pain management at tail docking in 2021, by method



< ARTICLE CONTINUED FROM THE PREVIOUS PAGE

male lambs: 10%). The unsuitable product used for pain management with rings was TriSolfen® which is only suitable for use with mulesing, tail docking with a knife/shears and castration with a knife/shears. It will only work on open wounds.

9% of respondents used a combination of long-acting analgesic and short acting local anaesthetic which is considered best practice. See Table 1 below to check which products are suitable for each method of tail docking.

Castration

More pain management is needed at castration

Almost all respondents castrated their male lambs (98%); rings were almost universally used (rings 97%, cold knife 2%, shears/knife 1%). Trends in castration practices have not changed since the 2017 AWI Merino Husbandry Practices Survey or the 2020 AWI Wool Industry Profile.

Only about one-third (30%) of respondents reported using pain management in 2021 for castration of male lambs. Unfortunately, 58% of respondents that used rings used an ineffective pain management product for that method (TriSolfen®). That means that only around 17% of all respondents used a suitable pain management product for castration.

Only 8% of respondents that castrated reported using a combination of a long-acting analgesic with a short-acting local anaesthetic, which is best practice for pain management at castration.

Anaesthetics and analgesics

Check you have the right product for the job!

The best practice for pain management at mulesing, tail docking and castration is to make sure your lambs have both a long acting analgesic **and** the shorter acting local anaesthetic.

Tri-Solfen®, a local anaesthetic, was registered

for mulesing in 2007 and tail docking and castration in 2016, whilst the Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) Metacam® and Buccalgesic® were registered for mulesing, tail docking and castration in 2016 (Metacam®) and 2017 (Buccalgesic®). Numnuts, a handheld device that delivers a local anaesthetic for ring castration and tail docking by rings (NumOcaine®) was only launched in 2019. Hence, the results of this survey may indicate woolgrowers' unfamiliarity with the use or availability of these products for tail docking and castration.

If you carry out all three husbandry procedures at once, **ONE** dose of an **analgesic** such as Buccalgesic® or Metacam® will cover the lamb for all three husbandry procedures. Then apply a **suitable local anaesthetic** to each area of operation (ie breech, tail and scrotum), see Table 1 below.

You can find more details in the AWI fact sheet *Anaesthetics and analgesics at lamb marking* available at www.wool.com/aa.

Table 1: Pain management products and suitability for mulesing, tail docking and castration

Action	Application	WHP	Mulesing	Tail docking with knife/hot knife	Castration with knife	Tail docking with rings	Castration with rings
Short acting local anaesthetic eg Tri-Solfen®	Fan spray application to the wound (effective in less than 1 min)	90 days	✓	✓	✓	✗	✗
Longer acting analgesic eg Buccalgesic® or BUTEC OTM®	Custom applicator gun - gel is applied inside the cheek (effective from 15 mins)	10 days	✓	✓	✓	✓	✓
Injectable longer acting analgesic eg Metacam 20®	Subcutaneous injection high on the neck behind the ear (effective from 10 mins)	11 days	✓	✓	✓	✓	✓
Short acting local anaesthetic eg NumOcaine® (Numnuts® delivery)	Injection with Numnuts® device (effective in less than 1 min)	0 days	✗	✗	✗	✓	✓

- Growers must follow all label directions and veterinary instructions when using pain relief products.
- Injectable meloxicam products, such as Metacam 20®, are Section 4 (S4) veterinary medications and require consultation with your local vet.
- Buccalgesic® can be purchased from your local vet.
- BUTEC OTM® is available over the counter from your local reseller.

- Tri-Solfen® and NumOcaine® (Numnuts® delivery) are both available over the counter from your local reseller or from your local vet and NumOcaine® is also available to buy directly from Numnuts online.

Follow all label directions and veterinary instructions when using analgesics and anaesthetics.

More information: The full 2021 AWI Merino Husbandry Practices Survey report – as well as a detailed analysis of the trends in mulesing, tail docking and castration practices of Australian woolgrowers – is available at www.wool.com/flystrikelatest under 'Woolgrower Surveys'. The 2017 AWI Merino Husbandry Practices Survey is also available at the same location.

LAMB MARKING TRAINING GUIDE



This training guide is designed to assist woolgrowers and their contractors perform best practice lamb marking and mulesing procedures with the utmost care and attention to ensure the best short- and long-term welfare outcomes for the animal.

Published in June 2020, the 80-page guide was developed by AWI in partnership with

WoolProducers Australia and the Livestock Contractors Association. It includes sections on:

- Overview of lamb marking
- Work health and safety
- Legislation and Codes of Practice
- Preparation and planning
- Lamb marking and mulesing equipment
- Chemical and animal health product use

(disinfectants, insecticides and analgesia/ anaesthetics)

- Lamb marking and mulesing procedures
- References
- Chapters from the Australian Animal Welfare Standards and Guidelines for Sheep relating to responsibilities, tail docking, castration and mulesing.

More information: Access the guide at www.wool.com/markings-guide

TAIL LENGTH MATTERS!

Tail docking is a standard practice in the sheep industry and is important in helping reduce susceptibility to flystrike, but care must be taken to do it correctly.

Australian sheep producers are often docking tails too short, according to results of a 2021 survey conducted for AWI and Meat & Livestock Australia.

Bridget Peachey, AWI Program Manager, Sheep Health and Welfare, said from all producers surveyed the average tail length for ewes was 2.5 palpable joints from the body and for wethers was slightly shorter at 2.4 joints.

"This is not long enough for optimum sheep health and welfare," Bridget said.

"There is ample evidence that a medium-long or long tail, that is a tail docked at the third or fourth palpable joint, is better than a short tail."

Sheep with medium-long or long tails have lower rates of flystrike, prolapse, perineal cancer and arthritis than sheep with short tails.

Sheep veterinarian Dr Joan Lloyd, whose research confirmed the link between short tails and arthritis, said it was disappointing that short tails were still prevalent in the sheep industry.

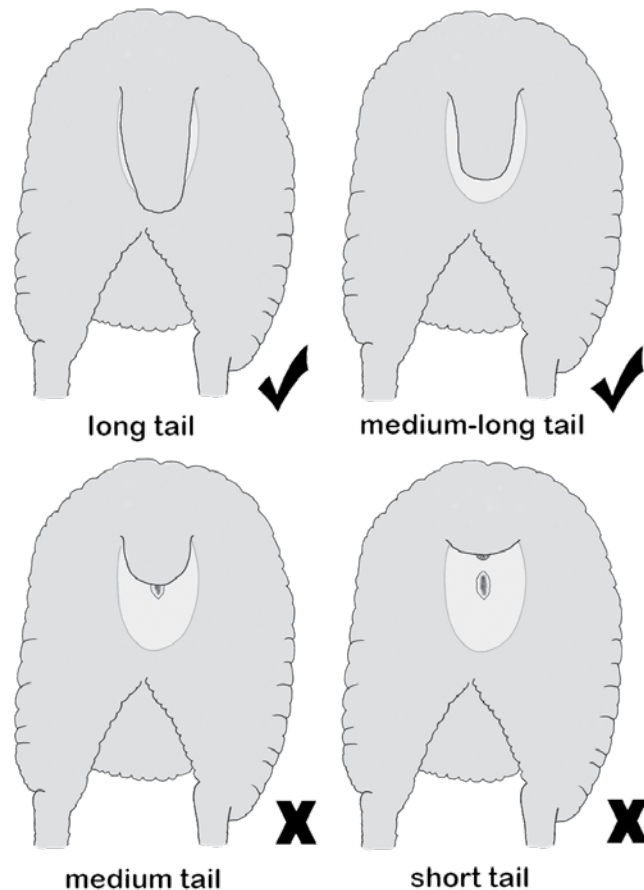
"Most arthritis in Australian sheep is caused by bacterial infection. The bacteria enter the sheep's bloodstream via a wound. It can occur through any skin tear, but short tail docking is especially problematic," Dr Lloyd said.

"When tails are docked too short, more muscle and tissue is involved. The wound takes longer to heal, which means it has more chance of becoming infected. One of the consequences of infection is arthritis/polyarthritis, which occurs when bacteria spread through the blood to the joints."

Dr Lloyd conducted extensive post-mortem examination of sheep and found rates of arthritis/polyarthritis are likely to be more common in lambs in southern Australia than suggested by abattoir surveillance data, with an average of 2% of carcasses affected within affected lines.

"Arthritis is a serious sheep health and welfare concern from short tail docking, but it is not the only issue with the practice," she said.

"The damage to muscle and other tissues means sheep with short tails are unable to lift their tails to defecate. In ewes, this also applies to urinating. This means short tails tend to lead to higher dag formation and, in ewes, more urine staining. These things in



Sheep with long or medium-long tails have lower rates of flystrike, prolapse, perineal cancer and arthritis than sheep with medium or short tails.

turn lead to higher rates of breech flystrike. It seems counter-intuitive that a short tail would cause more flystrike but the evidence has long supported this fact.

"Research conducted in the 1930s and 40s established this link. The research was conducted on unmulesed sheep and is as relevant today as it was then."

The research, conducted prior to the availability of modern flystrike prevention chemicals, reported flystrike rates in sheep with short tails as being more than double that in sheep with long tails. In long tailed sheep 13 sheep per 100 were struck, in medium tailed sheep the rate was 27 per 100 and in short-tailed sheep it was 38 strikes per 100 sheep.

"The best length to dock a sheep's tail is in the vertebral space after the third or fourth palpable joint," Dr Lloyd said. "The remaining tail should cover the vulva in a ewe and be the equivalent length in a ram or wether. Another good landmark is the bare area on the underside of the tail. The bare area on the underside of the tail should never be cut through. Leaving this bare area intact means the animal will be able to lift its tail to defecate and urinate."

A shorter tail leaves the breech exposed to sunlight, which can lead to cancers of the perineal region. Research conducted in the 1980s found squamous cell carcinomas present in flocks on 82% of farms surveyed. The prevalence of cancers ranged from 0.12% to 4.0% of ewes, and increased with age. More than 3% of ewes over five years of age were affected. Most cancers involved lesions of the vulva and led to the animal being euthanased.

Rectal prolapse is also more common in sheep with short docked tails, due to muscle damage. If sheep are coughing from pneumonia, which is common across all sheep-raising regions of Australia, they are much more likely to suffer rectal prolapse if the tail has been docked too short. Prolapse is generally fatal.

"There are many sound reasons to dock in such a way that a medium-long to long tail is created," Dr Lloyd said. "There are no good reasons to dock it shorter than that."

BREEDING FOR NATURAL FLYSTRIKE RESISTANT MERINOS - PUBLICATIONS

AWI makes available publications about breeding for flystrike resistant Merinos on its website at www.wool.com/flystrikelatest/#breeding

Here is a selection of the available publications:



PLANNING FOR A NON-MULESED MERINO ENTERPRISE

(March 2018)

This 16-page report outlines the key learnings from a number of wool-growing enterprises, from a diverse range of environments and Merino types, that have moved to a non-muleseed enterprise.



VISUAL SHEEP SCORES – PRODUCER VERSION

(Updated 2023)

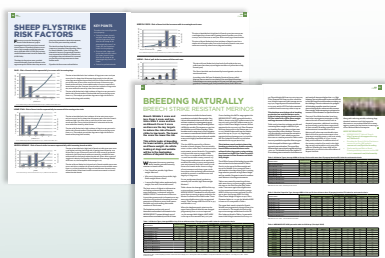
This 76-page pocket guide for commercial and stud breeders provides a standardised framework for assessing and scoring visual sheep traits, including breech and wrinkle traits.



AN INTRODUCTION TO MERINO VISUAL CLASSING & AN INTRODUCTION TO STOCKMANSHIP

(2015)

Two workshop packages comprising theory and practical activities that aim to develop participants' core skills.



SHEEP FLYSTRIKE RISK FACTORS

(March 2020)

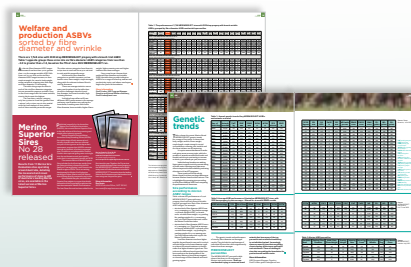
BREEDING NATURALLY BREECH RESISTANT MERINOS

PART 1 – June 2020

PART 2 – September 2020

Each is a 2-page article from *Beyond the Bale*.

Plus an update in the June 2021 edition.



WELFARE AND PRODUCTION ASBVS

(December 2022)

MERINO GENETIC TRENDS

(September 2022)

Each is a 2-page summary article from *Beyond the Bale*.



GENETICALLY REDUCING BREECH FLYSTRIKE: HOW FAST AND WHAT ARE THE CONSEQUENCES?

(June 2019)

LOW WRINKLE-HIGH FLEECE WEIGHT PRODUCTIVE SIRES EASIER TO FIND

(June 2019)

Each is a 2-page summary article from *Beyond the Bale*.

AWI'S FLYSTRIKE EXTENSION PROGRAM

Reducing the impact of flystrike remains a priority for the Australian sheep industry – and AWI is committed to helping woolgrowers tackle this significant sheep health and welfare issue through its comprehensive Flystrike Extension Program.

AWI's Flystrike Extension Program supports woolgrowers to improve the lifetime welfare of their sheep, reduce their reliance on mulesing and crutching, optimise chemical use and increase whole farm profitability through the provision of practical information and tools and access to accredited advisor support on flystrike management.

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

Available now!

It's Fly Time!TM

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

See www.wool.com/itsflytime

DemystiFlyTM

Practical **information** about managing chemical resistance in blowflies.

See www.wool.com/demystify

SimpliFlyTM

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

See www.wool.com/simplifly

Coming in 2023

ClassiFlyTM

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

This initiative will be launched soon!

StrateFlyTM

A one-day **workshop** to develop a property-specific, whole-of-farm strategy for moving to a non-mulesed enterprise.

AmpliFlyTM

One-on-one **coaching** and support from a trained and accredited advisor to assist you to implement, monitor and improve your whole-of-farm plan for preventing and controlling flystrike.

Access information about upcoming workshops

To find out when there is going to be a **SimpliFlyTM workshop** or **ClassiFlyTM workshop** available near you, contact the AWI-supported 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 the AWI Helpline on 1800 070 099.

More information

AWI's Flystrike Extension Program: www.wool.com/flystrikeresources

Flystrike management, including access to interactive decision support tools: www.flyboss.com.au

AWI's Flystrike Research, Development and Extension Program: www.wool.com/flystrike



Join us in
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2023 MerinoLink Conference

Conference: **Thursday 1st June 2023, Bathurst NSW**

Followed by... **MerinoLink Sire Evaluation Field Day: Friday 2nd June 2023**

MerinoLink invites all of industry to join us in a fresh new location in Bathurst, NSW for our annual conference. Featuring the latest research presented by a broad spectrum of key industry presenters across a brand new program of topics.

The 2023 conference will be held on Thursday 1st June followed by dinner that evening and the opportunity to attend the MerinoLink Sire Evaluation Field Day on-farm the following day.

EVENT INFO + REGO: merinolink.com.au/conference2023



Merino LINK

MLP – COMPARISON OF MLP FBVs WITH ASBVs



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: CSIRO
Committee: New England Merino Sire Evaluation Association

The MLP project is tracking the lifetime performance of 5,700 ewes as they proceed through four to five joinings and annual shearings.

A full suite of assessments will be undertaken including visual trait scoring, classer gradings, objective assessments of a range of key traits and index evaluations.

A unique and extensive dataset will result and be used to enhance existing Merino breeding and selection strategies, for both ram sellers and buyers, to deliver greater lifetime productivity and woolgrower returns.

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

How well do within Flock Breeding Values line up with ASBVs? In this update, we share some of the analysis work completed in 2022 by the Merino Lifetime Productivity Project (MLP) analysis team based at the Animal Genetics Breeding Unit (AGBU).

Sheep producers have a range of tools available to help them make breeding and sheep selection decisions. One of these tools are breeding values which provide a prediction of an animal's future progeny performance for a range of measured and visually assessed traits recorded under specific data collection protocols.

Breeding values can be generated using varying volumes of data, with the proven outcome that more data will result in a more accurate prediction. Potential sources of data for breeding value calculations include:

- using an animal's own measured or assessed data
- data from progeny within a flock
- data from progeny collected from two or more flocks (across flock)
- data from relatives
- genomic tests underpinned by reference populations such as MLP.

MLP Reports include Sire Flock Breeding Values (FBVs) that are generated using data collected from the daughters of industry sires at each MLP site. The analysis team recently explored whether the Balmoral MLP sire FBVs generated within the site rank similarly to the sire Australian Sheep Breeding Values (ASBVs) generated using all the available data in the national across flock genetic analysis program MERINOSELECT.

In comparing the FBVs with ASBVs we need to recognise there are differences in the way that these breeding values are calculated:

- ASBVs include the use of genomic information, and MLP FBVs do not.
- ASBVs include information from all relatives outside the MLP project, often including information on the sires themselves from their home flocks.

We also need to recognise that the data that generated the FBVs was included in the analysis to produce the ASBVs. The Balmoral sires each had between 14 to 45 daughters evaluated through life at Balmoral (plus one shearing of their brothers' data), with between 50 and 5,443 progeny evaluated in MERINOSELECT.

To compare the two sets of breeding values, AGBU focussed on measured traits including clean fleece weight (CFW), fibre diameter (FD), staple strength (SS), body weight (WT), muscle (EMD), worm egg count (WEC) and weaning rate (WR) along with four indexes (MP+, DP+, FP+ and WP+). Traits at several age stages were compared. The age stage prefixes can be found prior to the trait abbreviations in results (Y=Yearling, H=Hogget and A=Adult).

More information about the industry indexes reported can be found in MLP reports by visiting www.merinosuperiorsires.com.au/mlp-project-reports/.

The comparison between the Balmoral sire FBVs and their ASBVs showed correlations to be high to very high, ranging between 0.75 and 0.95 for the traits and indexes analysed.



The Balmoral site's Tom Silcock and Mark Bunge.

QUICK FACT

A correlation is the degree to which two variables are linearly related. Correlation classifications:

Very low - 0.00 to 0.10

Low - 0.11 to 0.30

Moderate - 0.31 to 0.60

High - 0.61 to 0.80

Very high - 0.81 and above

Table 1: Correlations (r2) of Balmoral MLP site sire FBVs and their ASBVs for different wool, body traits, weaning rate and DP+, MP+, FP+ and WP+ indices

	Wool					Body			Welfare	Repro	Indices			
	YCFW	ACFW	YFD	AFD	YSS	YWT	AWT	YEMD	HWEC	WR	DP+	MP+	FP+	WP+
r2	0.87	0.91	0.93	0.95	0.89	0.89	0.89	0.89	0.86	0.80	0.75	0.77	0.81	0.78

The lower correlation of 0.8 for Weaning Rate is expected given reproduction is a lowly heritable trait impacted by a range of unknown factors, while the highly heritable Fibre Diameter had a high correlation of 0.95. The index correlations are lower than the individual traits because indexes aggregate many traits together, so any differences can be magnified.

“These results indicate that if you run a sire evaluation trial and then put the data into MERINOSELECT, as happens now, the breeding value results you observe at the site level are very consistent with where the ASBVs

ultimately end up,” AGBU’s Professor Andrew Swan commented on the findings.

AMSEA’s Ben Swain added, “Ewes are measured annually at MLP sites, and the site FBVs are backed by years of data; we look forward to future analysis work that will explore the level of data that’s optimal for breeding value prediction.”

Further work is planned that will test how well FBVs generated from the lifetime MLP data align with ASBVs by removing the MLP dataset from MERINOSELECT and comparing the two

fully independent data sets.

Additionally, modelling work once the MLP dataset is complete will also compare FBVs generated across all five MLP sites with just one, two, three, four, five, six or seven years of data with end-of-project ASBVs to determine the level of measurement required on farm to generate highly accurate ASBVs.

The results of these analyses will be shared in future publications.

Figure 1: Association between 2015 and 2016 drop Balmoral MLP sires’ flock DPP (DP+), FPP (FP+), MPP (MP+), DPP (DP+) index values using flock breeding values (FBV) and Australian Sheep Breeding Value (ASBV)

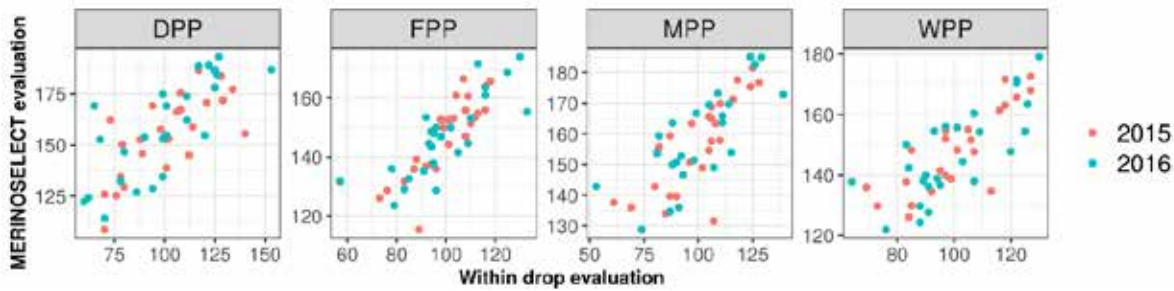
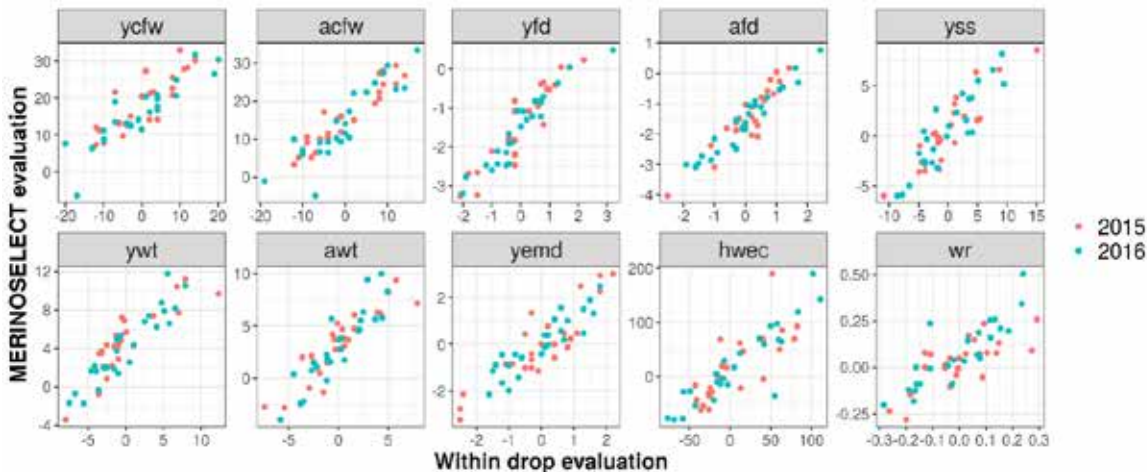


Figure 2: Association between 2015 and 2016 drop Balmoral MLP sires’ flock breeding values (FBV) and Australian Sheep Breeding Value (ASBV) for different wool, weight and weaning rate traits



MACQUARIE FINAL MLP FIELD DAY

TARC, 7878 Mitchell Highway, Trangie, NSW

Wednesday, 29 March 2023

Field day: 12.00–4.30pm

Industry dinner: From 6.00pm, Narromine

The day will include the FINAL display of the 2017 and 2018 drop MLP ewes at the NSW DPI-run Trangie Agricultural Research Station (TARC). There will be plenty of time to inspect the ewes penned in their 31 sire groups which will be split into two and penned by ewe type. A range of industry speakers will present at the field day and dinner.

More information: merinosuperiorsires.com.au/events/macquarie-final-mlp-field-day/



SUPPLEMENTARY FEEDING R&D FOR LAMB SURVIVAL

An AWI co-funded project is comparing the effects of using trail feeding or self-feeders during lambing on ewe behaviour and lamb survival. The project's results will be used to create supplementary feeding guidelines for sheep producers to optimise lamb marking rates.

Supplementary feeding is often required to meet the nutritional demands of ewes lambing in autumn and when feed-on-offer (FOO) is limited during winter or early spring.

However, there is no industry consensus on optimal supplementary feeding strategies for lambing ewes, a fact highlighted during consultation with sheep producers who are actively seeking advice on the matter.

"A survey of producers in southern Australia showed that 92% of them believe further research is warranted into the best supplementary feeding regimes to optimise

lamb survival," said AWI Project Manager, Reproduction & Nutrition, Emmah Goldsmith.

A project jointly funded by AWI, MLA and Murdoch University with collaborators Charles Sturt University, Nutrien Ag Solutions and Dynamic Ag, is currently under way to remedy the situation.

"The overall project is evaluating strategies for supplementary feeding at lambing via trail feeding, and self-feeders, and aims to quantify the impacts on lamb survival to marking on commercial farms across southern Australia," Emmah said.

"It will also assess changes in mob behaviour associated with the feeding method using sensor technology.

"The ultimate outcome from this project is to produce guidelines for sheep producers to increase lamb marking rates."

A significant proportion of producers in southern Australia lamb ewes onto dry feed in autumn. Increasing climate variability also means that a greater number of producers may have dry or limited green feed available when lambing in winter or even early spring.

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Anecdotal evidence has suggested that supplementary feeding ewes at lambing may cause them to abandon their lambs which could reduce lamb survival. However, there is conflicting opinion as to whether trail feeding or the use of self-feeders is more favourable for lamb survival.

Research sites

Dr Amy Lockwood of Murdoch University says the project's research sites are being located in both the medium to high and the low rainfall zones to capture variation in environmental and management conditions, including the size of lambing paddocks in which ewes are being supplementary fed.

"At least 24 on-farm research sites will be established across Western Australia, South Australia, Victoria and New South Wales during the project," she said.

"We have so far completed work for our first trial at 10 research sites and are currently seeking more sheep producers across southern Australia to host the trial on their farms. We're keen to hear from anyone that's interested in being involved." **See the box to the right for more information and to find out how to get involved.**

Amy says sensor technology has been used at four of the sites to investigate the effects of supplementary feeding methods on ewe

behaviour during lambing. Sensor technology will be used at a further four to five sites for the initial stage of the project and then be used at up to eight sites for stage two of the project which will involve more intensive work.

The researchers also aim to investigate other factors that influence supplementary feeding on lamb survival, such as the effects of the proximity of trail feeding or self-feeders to water or the number of self-feeders in the paddock on ewe behaviour during lambing.

Project outputs

The project team will complete a detailed benefit-cost analysis for each feeding strategy.

At the end of the project, comprehensive guidelines for supplementary feeding ewes during lambing will be produced to help sheep producers improve their marking rates.

The guidelines will be rolled out to producers via existing networks such as AWI's State Grower Networks along with extension programs such as the AWI-funded Lifetime Ewe Management course.

YOUR CHANCE TO GET INVOLVED!

Producer collaborators needed

The research team is seeking sheep producers across WA, SA, Vic and NSW that pregnancy scan at least 300 single-bearing ewes and 160 twin-bearing ewes, and would be interested in comparing the impacts of supplementary feeding ewes during lambing with self-feeders and by trail feeding on lamb survival.

Interested producers can get in touch with the project leader(s) for their state to find out more:

Western Australia

Amy Lockwood a.lockwood@murdoch.edu.au 0429 976 483
Serina Hancock s.hancock@murdoch.edu.au 0403 570 823

South Australia

Daniel Schuppan Daniel.Schuppan@Nutrien.com.au 0477 315 931

Victoria

Steve Cotton s.cotton@dynamicag.com.au 0447 352 321

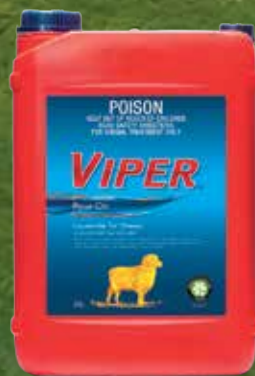
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CLIMATE OUTLOOKS: FOREWARNED IS FOREARMED



Jenny and Paul O'Sullivan

Paul and Jenny O'Sullivan from south Gippsland use new tools on the Bureau of Meteorology (BOM) website that enable them to see climate outlooks specific to their local area. The tools are a result of the Forewarned is Forearmed project, a partnership between government, research and industry sectors, funded through the Rural R&D For Profit Program.

Paul and Jenny O'Sullivan run sheep, cattle and horses on their family farm, Malabar Farm at Tarwin Lower in south Gippsland, which has a total area of 644 hectares (with 18% set aside for bush and infrastructure). The couple's flock comprises 2,000 cross-bred ewes which lamb in August each year. Shearing occurs in December and lambs are sold in January/February.

Here, the O'Sullivans tell us what climate information they access – and how a new decile bar tool on the BOM website is proving useful for them and how it can also be a winner for other producers.

What short term weather and climate information do you currently access?

We use short term forecasts from mobile weather apps such as the BOM Outlooks and Elders.

We need to know what the weather is doing each day to make decisions such as timing of fertiliser, spraying of weeds and haymaking.

From an animal husbandry point of view, weather impacts if we can mark lambs, use injections for vaccinations of livestock or use pour-on drenches. Best practice is to ensure livestock are dry to allow effectiveness of treatment.

We also check the short term forecast around shearing time. It's critical at shearing that we know whether there is rain coming as we need to keep the sheep dry and we only have enough cover for one day. You can't muck shearers around, especially not now when there is such a shortage.

We are also on the lookout for low temperatures during shearing and directly after shearing: off the shears sheep are particularly

sensitive to the cold as they have lost their insulation. So we will put them in a paddock with a good shelterbelt which blocks the wind.

Low temperatures are important to know not just around shearing but all the time as we don't want to put our livestock under stress at any time, so we have established many shelterbelts across the farm to help combat the temperatures.

What long term weather and climate information do you currently access?

We like to use the Forewarned is Forearmed (FWFA) decile bar tool, available on the BOM website. These are location-specific bars that indicate the shift in the probabilities compared to usual across the deciles. They are available for rainfall, temperature max and min, for the weeks, months and seasons ahead.

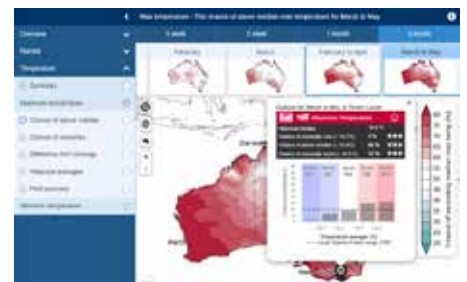
I find them very clear and easy to see, you can find your location on the map and hover your mouse over it and it will take you to the nearest weather station and give you the probabilities you need to help make decisions on farm.

I know many farmers are concerned about the accuracy of forecasting tools but the decile bar tool actually shows you how accurate it is compared to previous years, giving you more confidence to use it than perhaps you would have in the past.

What type of decisions are you using FWFA tools for and how?

We use the FWFA decile bar tool for making decisions about seasonal stocking rates and predicting pasture feed growth and availability, so we can match our stocking rate to the carrying capacity. When we are trying to decide

how many stock we can run over summer and winter, climate is very important and as we don't really buy in feed, we prefer to use the pasture we grow on farm.



An example of the Decile Bar Tool on the BOM's Climate Outlooks page for specific, highly localised areas, in this case Tarwin Lower where the O'Sullivans' farm is based.

The decile bar tool allows us to decide whether or not we are going to sell or hold stock and if it's to sell, it means that we can make this decision early, ahead of the market.

Managing our grazing pressure is a priority. We want to avoid overgrazing and having bare ground. We want to look after our soil for next year so the decile bar tool is key in helping us make decisions. We check the tool regularly.

I'd encourage all farmers to give these tools a go. We live in one of the most variable climates in the world. Tools such as the decile bar can help us make better decisions for our business, our soil, livestock and our mental health.

More information: View the features on the BOM website at: <http://www.bom.gov.au/climate/outlooks/>

To see a longer version of this interview, and to access climate information and tools to help you make better decisions for your farm business, visit Climate Kelpie at www.climatekelpie.com.au

COLLABORATIVE INVESTMENT TO HELP CLIMATE RESILIENCE

Australian farmers will be able to better understand and manage short-term climate risks as well as build long-term resilience, thanks to a collaboration between Agricultural Innovation Australia Ltd (AIA) and the Bureau of Meteorology.

The four-year program, Agri-Climate Outlooks, is a cross-sectoral \$19 million investment facilitated by AIA with the Bureau of Meteorology that aims to improve and enhance seasonal outlook services for the Australian agricultural industry. The Bureau has estimated the initiative could generate up to \$68 million annually in potential value for agriculture.

AIA is a not-for-profit, public company established to facilitate joint investment and collaboration in cross-industry agricultural issues of national importance. AIA's founding members are Australia's rural Research and Development Corporations (RDCs), including AWI. Agri-Climate Outlooks is AIA's first major initiative in the climate space.

AIA CEO, Sam Brown, says the Agri-Climate Outlooks collaboration is ground-breaking because the RDCs are working together on a large-scale project with common goals to help farmers mitigate the impacts of climate on their enterprises.

"Climate variability is proving to have a significant and devastating impact on agricultural and food production, as we have seen with recent floods, extreme weather events and subsequent food shortages and supply chain challenges," Mr Brown said.

"Growers need the most reliable, accurate and timely seasonal forecasting information to help them manage and adapt to changing climates.

This initiative will improve the relevance, trust and ease of use of climate information in their decision-making."

Agri-Climate Outlooks will develop decision-specific digital forecast tools and products tailored to specific commodities.

The investment also supports improvements to Australia's dedicated weather forecast modelling system and will strategically leverage previous investments made by RDCs and the Australian Government in improving climate and weather capabilities.

More information: www.aginnovationaustralia.com.au

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WOOL PRICE RISK MANAGEMENT COURSE

AWI has launched a short online course for woolgrowers that takes a look at the importance of wool price risk management and hedging principles. The content covers types of risk, risk management products, strategies and analysis in relation to the wool industry, and shows how a better understanding of these elements can enable an increased uptake of forward contracts and lead to improved market signals.

Australia has one of the most volatile agricultural sectors in the world, and agriculture is the most volatile sector within the Australian economy in terms of the annual value of its output.

This is even more so for the sheep and wool industries, with sheep farms having the most price volatility compared to other Australian agricultural sectors. For woolgrowers, this usually means that their income margins are at the whim of the rollercoaster of spot prices – and recent studies show a direct link between volatility and farm income.

Volatility affects the whole pipeline resulting in uncertainty that eventually affects decision making from the consumer right back to the farm gate.

New course for woolgrowers

In response, AWI recently launched a Wool Price Risk Management course, available for free on the company's online Woolmark Learning Centre. It places the wool industry as a leader in price risk management training.

The objective of the course is to deliver to woolgrowers a basic understanding of risk management and how it can play a role in enterprises across the supply chain. By the end of this course, learners should be able to understand:

- the importance of price risk management and the benefits of a well-functioning wool futures market
- the different types of risk associated with the wool pipeline
- the variety of risk management products and participants involved in the wool industry
- the concept of hedging principles relative to the wool industry
- how risk management strategies are developed and analysed to benefit the woolgrower.

The course has been designed to take about 2½ hours to complete, but learners can undertake the course at their own pace and go back to

previous sections to recap a topic if needed.

The Woolmark Learning Centre is optimised for use on a smartphone and tablet, as well as a desktop or laptop computer, and is available 24 hours a day, seven days a week, wherever and whoever you are.

The course is split into six modules – see the opposite page for an overview of each of the modules.

On completion of all the modules, learners gain their own certification from the internationally recognised Credly digital credential platform, which can be displayed on the user's own digital professional portfolio such as LinkedIn. A completion certificate can also be downloaded as a hard copy.

The information in the course is general in nature. Contact your broker for further advice.

More information: Access the course on the Woolmark Learning Centre at www.woolmarklearningcentre.com

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MODULES IN THE WOOL PRICE RISK MANAGEMENT COURSE



Module 1: A history of innovation and advancement

This first module explores a variety of Australian innovations with a focus on agriculture. It identifies the role the wool industry played in promoting these innovations before introducing the concept of hedging in relation to the Australian wool industry.

Module 2: The importance of price risk management

This module focuses on the significance of risk in relation to the wool industry. It discusses where agriculture in Australia and the wool industry sit regarding exposure to risk and explains how to develop a better understanding of this.

Module 3: The types of risk

This module provides an overview of the different types of risk associated with the wool pipeline (price risk, production risk, counterparty risk, sovereign risk, liquidity risk and funding risk). It outlines the most common risks that exist and focuses on the key risks that influence price and margin outcomes, enabling woolgrowers to make strategic decisions with regards to their enterprise.

Module 4: Risk management products and participants

This module explores the variety of risk management products available to assist the woolgrower in the development of a risk management plan for their enterprise, eg forward contracts vs futures contracts. It explains the various risk management tools that are available and the range of participants that operate in the risk management environment.

Module 5: Hedging principles

This module examines the concept of hedging and explains, using a worked example, how using a risk management strategy can offset adverse price movements in the physical commodity such as wool. It also explains how basis risk can be managed to benefit the woolgrower at settlement.

Module 6: Risk management strategies and analysis

This final module details risk management strategies and analysis required to minimise exposure to market risks associated with the changes in supply and demand. It discusses how to promote an understanding of forward price hedging and margin management using a range of data presentations.



LIFETIME EWE MANAGEMENT

More than 4,800 Australian producers have taken part in the AWI-supported Lifetime Ewe Management (LTEM) course. On average, producers increase stocking rate by 10.7%, marking percentage by 6%, weaning percentage by 8% and reduce ewe mortality by 23%.

The LTEM course, owned by AWI and RIST, aims to increase producers' understanding of the influence of ewe nutrition and management on overall reproduction rates and lamb and ewe survival.

LTEM groups meet six times during a period of 12 months. The course is very hands-on, being based in the sheep yards, shearing sheds and paddocks of participating woolgrowers, which enables participants to share and learn from one another.

Being involved in a LTEM course gives you the skills and support to make feeding and managing your ewes easier. Your trainer, an experienced sheep consultant, will work with you to:

- Learn how to condition score
- Prepare ewes for joining
- Manage singles 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
- Set targets for condition score, conception, lamb survival, ewe mortality, lamb growth rate and feed on offer.

More information: www.wool.com/LTEM

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WILD DOG CONTROL SUCCESS THROUGH COLLECTIVE ACTION

The NSW Northern Tablelands boasts some of the most rugged terrain in the state but is kicking goals when it comes to community and landholder engagement in a 'nil-tenure' approach to wild dog control.



North East NSW Wild Dog Coordinator **David Worsley** showing landholders how to set a canid pest ejector at a field day. PHOTO: NSW Local Land Services.

The Northern Tablelands has the highest livestock carrying capacities of any region in NSW. But it also harbours a pest animal population with plentiful habitat and food sources.

"Not only is it rugged terrain in parts of the region, but we have a lot of public land, national park and forest corporation estate – much of it is inaccessible country, whether that is freehold or public land, with migration of wild dogs between the two areas," said Northern Tablelands Local Land Services General Manager, Paul Hutchings.

Nil tenure approach

However, there has been good success in limiting predation by wild dogs in the region through the use of a 'nil tenure' approach with local communities. A nil tenure approach highlights the benefit of focusing on the 'common problem' rather than attributing ownership of a wild dog problem to individual land managers. Without coordination, getting all land managers involved can be difficult.

"People who have experienced direct predation are keen to be involved and make things happen, but it is a challenge to involve those people who either run cattle, don't see as many impacts from wild dogs, or live further away from the area," Mr Hutchings said.

Despite these challenges, Mr Hutchings says for the most part there has been strong support for coordinated wild dog control in the Northern Tablelands. It has resulted in good working relationships between private and public land managers in the region.

In the Northern Tablelands, a total of 46 wild dog management plans have now been developed across more than 3 million hectares – up from 2.5 million in 2019 – involving 2,500 landholders committed to a shared vision.

Ninety-two pest animal control groups target wild dog, fox, feral pig and feral deer in areas of existing and new activity, with more than 400 landholders involved in aerial baiting programs.

Last financial year, 64 community meetings brought producers and stakeholders together to instil a shared commitment for collective action around coordinated control programs.

Coordinated wild dog control

Mr Hutchings paid tribute to the work done by the North East NSW Wild Dog Coordinator Dave Worsley for his continued support of community led management groups. Dave took up the job in May 2015. The Centre for Invasive Species Solutions position is funded by AWI and Local Land Services.

"Dave has been a great success in our region and has contributed significantly to the strategic and operational management of wild dogs in the Northern Tablelands," Mr Hutchings said.

"He has worked closely with Local Land Services, Forestry and National Parks staff to assist with the planning and delivery of one of the largest aerial and ground baiting programs in the state.

"The 2022 autumn program involved about 400 landholders, 24 state forest areas, plus National Parks, 3,434km of aerial bait lines and combined (aerial and ground) 137,381 baits in 2021, just within the Northern Tablelands Local Land Services region.

"When looking at trends, there is no doubt the more we bait, the greater reduction in predation reports."

AWI Program Manager Vertebrate Pests, Ian Evans, says Dave Worsley continues to demonstrate the value of having a Wild Dog Coordinator position in the region.

"Dave has been instrumental in helping landholders and communities work together to combat wild dog attacks, and also coordinate on-ground wild dog control activities, thereby improving on-farm productivity, rural community wellbeing and rural biodiversity.

"He demonstrates great commitment and contact with producers. During last financial year, he had face-to-face engagement with 2,239 people, 4,369 phone calls and 2,467 messages."

National Wild Dog Action Plan

Mr Hutchings says the national approach under the National Wild Dog Action Plan is an important support for local wild dog control programs.

"The Plan is a great source of information, advocacy and point of reference that wild dogs are on the national agenda. It does help ensure we have lessons, issues and information from different parts of Australia available for sharing," he said.

"We can tap into the knowledge base of National Wild Dog Management Coordinator Greg Mifsud and NE Wild Dog Coordinator David Worsley as needed."

COLLABORATION ON AERIAL BAITING IN SOUTH AUSTRALIA

The first collaborative landscape-scale wild dog program between the Department of Primary Industries and Regions (PIRSA) and Bounceback, a Department for Environment and Water (DEW) initiative, was delivered in South Australia in December.

The AWI co-funded South Australia Wild Dog Coordinator, Heather Miller, said PIRSA supplied Bounceback with 15,000 wild dog baits. They replaced the fox baits normally used in central and northern Flinders Ranges aerial baiting programs which covered National Parks and nine surrounding pastoral leases.

"PIRSA and SA Arid Lands Landscape (SAAL) Board have collaborated for many years on wild dog management through their wild dog Biteback program, but this is the first time PIRSA has worked with the DEW Bounceback program to support them to replace their fox baits with wild dog baits as part of their twice annual aerial control program," Heather said.

"Thanks to funding from the State and Commonwealth governments, we delivered this first trial in the central and northern Flinders

Ranges and we aim to progress into other areas of the Bounceback program."

DEW's Bounceback Project Officer Geoff Axford says the collaboration provided efficiencies, helping control both wild dogs and foxes at a lower cost.

"The Bounceback program deploys five baits per kilometre of flight path and the transects are one kilometre apart. In all, wild dog strength baits were delivered to over 300,000 hectares," Mr Axford said.

SA Arid Lands Team Leader Landscape Operations and Projects, Greg Patrick, said with the landscape-level controls carried out under the SAAL Board's Biteback and the DEW Bounceback programs, landholders are reporting reduced fox and wild dog numbers and greater diversity on their properties.

The Biteback program has also worked with PIRSA on three wild dog aerial baiting programs in February, March and May 2023 targeting inaccessible areas and those areas where wild dog activity is being reported from the NSW border to Coober Pedy.



Photo: DEW

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Animal Management

Protect lambs from foxes!



With foxes on the rise again and taking up to 30% of lambs born, it is easy to increase profits by adopting effective fox control.

Many landowners underestimate the true problem, thinking that only a few foxes exist within range of the flock. There can be 300+ foxes within a 10km radius of any farm (@ave. density of 4/Km²), so taking only a small sample does not fully protect valuable lambs.

Follow this link to see a simple calculation for increasing profits at <https://www.animalcontrol.com.au/s/FOXOFF.pdf>



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FINDING VALUE IN WOOL DATA

By using modern sheep-classing technology, Queensland woolgrower Rod Avery from St George knows the level of production and the return that each animal contributes to his business. He is able to make more informed decisions when it comes to culling and breeding.

The Avery family has been on 'Burgorah' near St George for about 15 years. It is predominantly Mulga-Belah country with improved Buffel grass pastures during summer. About 2,833 hectares are leased for the family's sheep operation.

In the past, Rod has run a range of breeds but has now gravitated back to a self-replacing Merino flock.

"Right now, there's a decent value for wool so it's worthwhile doing a good job of it, even though the meat prices are also very good," Rod said.

"You've gone from \$20 to \$30 per head to \$150 to \$200 or more per head."

Rod has the data to confidently estimate that he gets two thirds of his income from store lambs, cast for age and cull sheep due to the big demand, with wool production providing the other third.

Wool production has increased from about 4.5 to 5kg/head for his ewes due to improved nutrition and flock management. He is actively continuing to improve the quality of the wool produced.

Collecting data

Rod wanted the ability to identify his best performers, so he started collecting data on his flock four years ago.

Every ewe has an electronic identification

[EID] tag with a unique number which is linked to data collected on weaning weight, fleece weight, wool micron and yield of each sheep at the first shearing.

Data is also collected on each ewe and if she has a single lamb or twins each year. He joined about 1,380 Merino ewes last year; 1280 were in lamb with 450 of those twin-bearing.

Rod now has a good record of his flock's attributes and can use this data to improve the quality and amount of wool produced and increase the number of sheep to take advantage of the demand.

"I just felt if I wanted to get any better with what I'm doing, I need to collect some information on what I've got."

Rod Avery, woolgrower

"I just felt if I wanted to get any better with what I'm doing, I need to collect some information on what I've got, and a lot of it is about whether I try to expand my sheep numbers or whether I try to reign them back in and cash in on the sheep values," Rod said.

Embracing technology

Rod has pushed himself out of his comfort zone to embrace new technology. He has invested about \$5,000 in quality equipment including animal scales, an indicator and an electronic tag reader (wand).

Rod also invested in ensuring there is Bluetooth connectivity between the indicator displaying the weights and the wand scanning the individual tags.

"From my experience, it's important to invest in a good set of scales and a reader that talk to one another with Bluetooth," Rod said.

"Also, get good support with the equipment because there are moments where technology and man sometimes don't agree and there's a bit of training involved to use the equipment.

"Set your yards up so it's easy to manage, have a good computer at home, and probably someone who knows how to use the spreadsheets.

"The cost of equipment can also be reduced by spreading the purchase bill. I actually shared a bit of equipment purchasing with one of my friends. He's got the printer and I've got the scales, and we just share about so you don't have to cover the full costs yourself.

"The first year or two, we were just using the sheep race to do the work and collect data, however, since then I've invested in a sheep handler, which is doing one sheep at a time so I can do multiple tasks such as weighing, drenching and fleece sampling.

"You've just got to think about your plan and how you handle your sheep to record the data. That's probably one of the big points."



The Avery family has been on 'Burgorah' near St George for about 15 years.



Woolgrower Rod Avery



Merinos on the property near St George in Queensland.



Rod working with his sheep handler.

Actively using the data

Rod says he's now in a position to actively use the data he's collected, having built up the number of ewe lambs on the property. All ewes get scanned for single and twins, with twinners run separately during lambing.

"I know if I wanted to downsize my flock for any reason, I could take out the bottom 30% of performers," Rod said.

"For example, this year we have 700 ewe lambs to choose from. If I can have their body weights, fleece weights and micron, I can start using that wool data and information and sell those off a lot earlier at a premium.

"The first year, collecting wool data showed a difference in fleece value ranging from \$24 to \$72."

Rod Avery, woolgrower

"But for the last few years, we have focused on getting the lambs on the ground and boosting productivity with good nutrition. Any dry ewe at lamb marking or scanned empty is culled."

Rod also has the option to actively use genetics testing and results in his ram selecting, instead of relying on visual assessment.

Increasing productivity through better nutrition

During the past few years Rod has had to contend with drought and has focused on keeping stock alive and healthy, resulting in

premium prices.

"I've been marking around 110% lambs during the past few years with the droughts, and I'm also cutting five kilograms of wool. Previously, I probably wouldn't have even cut four and a half and I probably only had 80% lambs. Also, I haven't got the weak, low tensile strength in the wool," he said.

"My agent and I talked about two years ago and worked out that we thought there was a \$10 per head benefit in better nutrition during lambing."

Rod has been actively improving the ways he gets that nutrition to his livestock, including regularly using supplementary feeding, investing in feeder bins and using containment yards when drought conditions are at their worst.

He also set up a feed-out bin on a truck and refined the feed provided, preferring faba beans due to their nutritional value and reduced risk of acidosis.

Final thoughts

Rod has this advice for producers considering going down the record keeping path to improve flock management and fleece quality:

"You need to know what you want to get out of it at the other end. I'm four years into data collection and I now have a good body of information to use," Rod said.

"For example, the micron of each ewe could be used to draft into separate micron mobs before shearing to gain a premium if that was warranted."

"Just think about what the possibilities are in increasing your productivity."

Rod Avery, woolgrower

Rod is a long-time owner classer and has a good idea of the traits he wants in the fleeces his flock produce. He encourages producers who want to do the same to take advantage of the courses on offer.

"The courses run by Australian Wool Innovation are number one and the Leading Sheep grower network does a good job pointing you in the right direction – the more of those we get around the better," he said.

Rod feels his approach is, in its own way, helping improve the state of the wool industry.

"The first year I collected the wool data, we could see the huge variations in the flock, from a ewe with \$72 worth of wool, down to one with \$24 worth of wool. If you add in the value of one or two lambs, it is worthwhile to identify the productive ewes.

"If you want to select an animal that's going to be the most productive to breed from, wouldn't you want the information?"

More information: View a video of Rod Avery discussing the benefits of collecting wool data on the Leading Sheep YouTube channel at www.youtube.com/@LeadingSheepProject



Wool production has increased from about 4.5 to 5kg/head for Rod's ewes.



Every ewe has an electronic identification (EID) tag with a unique number which is linked to data.



Collecting wool data showed a difference in fleece value ranging from \$24 to \$72.

AWI GROWER NETWORKS

PRODUCERS LEARNING FROM PRODUCERS



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- **AWI grower networks are present in each wool-growing state.**
- **They aim to increase the long-term productivity and profitability of producers.**
- **All woolgrowers are encouraged to get involved.**

AWI-supported extension networks provide opportunities for producers to get involved in practical programs that focus on making positive changes to on-farm production and management practices.

Be involved as little or as much as you like: sign up for newsletters about local issues, view webinars, attend local field days and workshops.

The networks are fundamental to:

- the spread of new ideas
- continuing education
- the adoption of best practice
- giving AWI a direct link to what is happening on-ground.

Ongoing strong partnerships with state departments of agriculture, private providers and woolgrowers help ensure the grower networks continue to generate increased participation and reported benefits by woolgrowers.

To learn more about the networks and how to get involved, refer to the website of your state network, or contact the network manager indicated to the left.

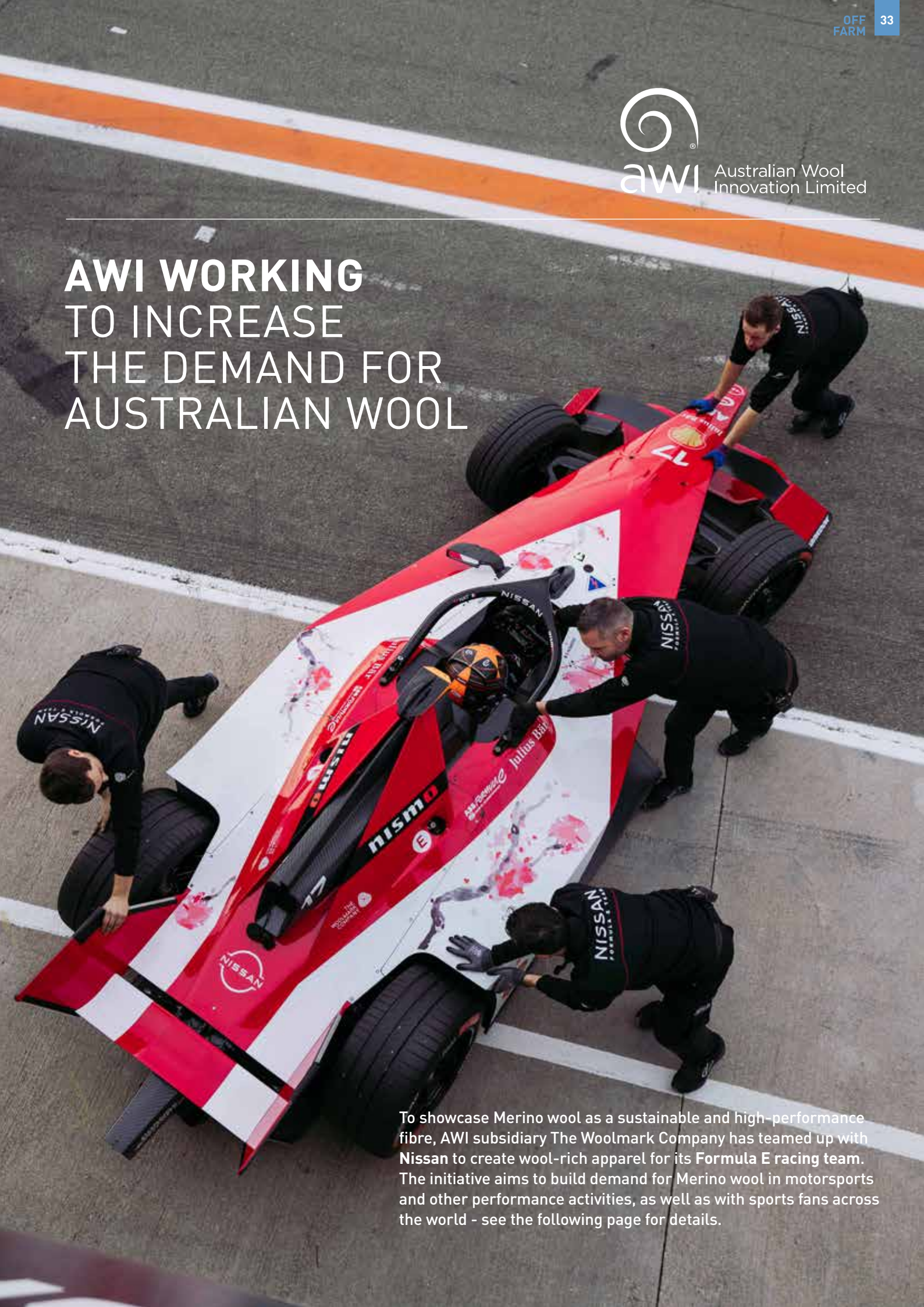




awi

Australian Wool
Innovation Limited

AWI WORKING TO INCREASE THE DEMAND FOR AUSTRALIAN WOOL



To showcase Merino wool as a sustainable and high-performance fibre, AWI subsidiary The Woolmark Company has teamed up with Nissan to create wool-rich apparel for its Formula E racing team. The initiative aims to build demand for Merino wool in motorsports and other performance activities, as well as with sports fans across the world - see the following page for details.



Nissan's Formula E drivers Norman Nato (left) and Sacha Fenestraz (right) wearing the Merino wool kit during pre-season testing at Le Mans (France), with Nissan's new Gen3 racing car behind them.



The Nissan pit crew wearing their Merino team gear with the Nissan's Gen3 racing car. The car has 350KW of power, is capable of 320kmh, and can regenerate a staggering 600KWh of energy.



The Nissan Formula E team all wearing their Merino wool team kit at the first race of the season in Mexico City.



The start pack of the Formula E race in Mexico City. PHOTO: Sam Bloxham.



The Nissan team's racing car displaying the Woolmark logo.



The Nissan team's Merino wool apparel and the racing car displaying the Woolmark logo.

THE FUTURE OF MOTORSPORTS

MERINO WOOL TAKES TO THE TRACK WITH NISSAN'S FORMULA E TEAM

To showcase Merino wool as a sustainable and high-performance fibre, AWI subsidiary The Woolmark Company has teamed up with Nissan to create wool-rich apparel for its Formula E racing team. The initiative aims to build demand for Merino wool in motorsports and other performance activities, as well as with sports fans across the world.

First held in 2014, Formula E is a single-seater motorsport championship for electric cars. It is the fastest growing motorsport in the world. Since the 2020-21 season, Formula E has been an FIA World Championship, making it the first single-seater racing series outside of Formula One to be given world championship status.

Formula E is a global phenomenon. Each year, it has a series of races held across the world – this season in Europe: England, Italy, Germany and Monaco; in the Americas: USA, Mexico and Brazil; as well as in Saudi Arabia, India, South Africa and Indonesia. The race series provides an opportunity for The Woolmark Company to engage with an international audience comprising millions of sports fans, as well as businesses and media.

However, Formula E is more than a just a racing series – the series acts as a competitive platform to test and develop the latest in electric technology, paving the way for the road cars of tomorrow. In other words, Formula E embodies not only high-performance but also the mega-trend towards a more sustainable future, two attributes with which Merino wool also perfectly aligns.

New partnership between The Woolmark Company and Nissan

The Woolmark Company has joined the Nissan Formula E Team as its technical partner to develop an innovative Merino wool-rich team kit.

AWI CEO John Roberts says that by aligning itself with a leading motorsport team competing in zero-emission electric vehicles on the global stage, The Woolmark Company is helping build the international reputation for Merino wool as a sustainable, technical fibre for performance apparel.

"As we take a bold and exciting first step into the world of motorsport, it was vital to find a partner who shared our vision. The Nissan Formula E Team has the ambition to do things differently, and they are redefining the way we wear wool by bringing the fibre's innate performance to the motorsport industry," John said.

"Our technical team worked hand-in-hand with Nissan to craft a performance-oriented team kit, driving unexpected product offerings thanks to the inherent technical and eco-credentials of the fibre. The innovative nature of Merino wool is paralleled to the technology behind Formula E thanks to manufacturing techniques and engineering between our teams."

The 2022-23 race series, which ends in London in July, is Nissan's fifth season racing in Formula E. However, this is the first time that the Nissan team is wearing Merino wool: a 100% natural, renewable, biodegradable and recyclable fibre.

"We are proud to partner with a company that, like Nissan, dares to do what others don't and is committed to build a more sustainable future through technology and innovation," said Nissan Formula E Team Managing Director, Tommaso Volpe.

"Our partnership with The Woolmark Company will provide Nissan Formula E Team with a high-performance kit made with natural and biodegradable Merino wool fibre. This proves once more that, like in Formula E, high-performance and sustainability can go hand in hand."

Tommaso Volpe, Nissan Formula E Team Managing Director

"Partnering with The Woolmark Company was a natural but conscious decision for us, as we continue to look for more sustainable solutions in line with Nissan's commitment to achieve carbon neutrality across all operations and the life cycle of our products by 2050."

Merino wool-rich racing team kit

The Nissan Formula E apparel heralds the emergence of a new breed of nature-based team kit in motorsport, taking advantage of Merino wool's natural properties to maximise performance, durability and comfort for the whole team.

Soft on the skin, Merino wool's unbeatable moisture management, thermoregulation and

anti-odour properties are perfectly matched to performance-led environments – and with races being held across the world, Merino wool provides the versatility to be suitable for a range of climates, from hot to cold.

Highlighting new innovations in technical layering, the racing kit features Merino wool blend base-layers, mid-layers and outer-layers: T-shirt, polo shirt, shirt, softshell jacket, ¼ zip jumper, rain jacket, cargo pants, shorts, and cap.

The team kit is made entirely in Europe using Australian Merino wool. It is Merino Perform certified by The Woolmark Company, guaranteeing longevity and durability of the products. Woolmark-branded product from Nissan will be available for purchase.

The Woolmark Company logo, owned by Australian woolgrowers, is displayed on the racing team apparel – and also on the side of the Nissan racing cars, on event infrastructure and on advertising touch points.

A huge PR campaign has been launched through a program of events and initiatives, including through digital and social channels, as well as press trips to visit the Nissan team.

More information: woolmark.com/formula-e

What benefits does the partnership deliver to woolgrowers?

1. **Increased consumer awareness** of Australian wool's technical and environmental benefits amongst a global sporting audience, leading to increased consumer demand for wool products.
2. **Future product sales** of Woolmark-branded apparel from Nissan.
3. **New business opportunities** for global performance brands to work with The Woolmark Company's teams on product development with Australian Merino wool.

BUILDING THE DEMAND FOR WOOL IN SPORTS AND OUTDOOR

Photo: Jake Norton

With performance apparel now such an important sector in the global textile industry, AWI's marketing arm The Woolmark Company was once again at the world's leading sports and outdoor trade show, ISPO Munich, to promote the natural performance benefits of Australian wool.

An important focus of The Woolmark Company's product development and marketing strategy is to increase demand for Australian Merino wool in sports and outdoor markets.

The Woolmark Company is increasingly collaborating with leading manufacturers and brands in these markets. Many brands are now incorporating wool in their collections, but there is still further significant potential for growth in demand for the fibre.

A key opportunity to engage with brands in this sector is at the world's largest sports and outdoor trade show, ISPO in Munich, which resumed in November following a two-year COVID-related interruption. There were more than 1,700 exhibitors and 40,000 visitors from 170 countries.

Sustainability and innovation were the top topics at the trade show. It was clear to see there that within the sporting goods industry, the outdoor sector in particular is a pioneer when it comes to sustainability.

As a natural, biodegradable and renewable fibre, wool is the perfect choice for brands that are seeking to produce clothing that has a minimal impact on the environment. The fibre also has excellent performance properties – such as breathability, thermal regulation, elasticity and odour resistance – that make it ideal for these markets.

Promoting Australian wool

The Woolmark Company had a stand at the ISPO trade show that enabled the company's staff to promote the natural benefits of Australian wool to many product development and sourcing staff of leading brands. Many productive meetings were held.

AWI European Product Marketing Manager, Rebecca Kelley, says the conversations with the brands were positive and full of opportunity for wool.



The Woolmark Company's stand at ISPO was built around The Wool Lab's 'Endurance' sports performance theme, supported by the tagline 'Merino wool. The fibre that never stops.'

"There was a lot of interest in wool from a wide range of brands: those considering wool for the first time and brands for which wool makes up a significant part of their offering that are looking for more innovation such as in outerwear and below the waist," Rebecca said.

"There was a lot of interest in wool from a wide range of brands."

Rebecca Kelley, AWI European Product Marketing Manager

"Sustainability is an important consideration for brands and there's a drive towards the reduction and replacement of non-renewable materials. Wool had a strong presence overall at the show and we continue to make headway in centering wool as a strategic fibre in a less impactful sourcing strategy. Unfortunately, it is easy for some brands to get sucked into

the 'green-washing' machine – for example recycled polyester and polyamide fibres are now commonplace and it's easy to put wool into the same paradigm forgetting that there are two very different starting points.

"We are continually working to educate the supply chain as well as consumers that synthetic fibres are made from oil, whereas wool is a 100% natural, renewable and biodegradable fibre. Our 'Wear Wool, Not Fossil Fuel' campaign (see page 43) helps raise awareness of this, with a lot of brands that we spoke to at ISPO referencing the campaign.

"While the positive shift in people's attitude towards health and fitness is helping build the sector, brands are feeling some anxiety at retail because the unsettled global economic climate means that consumers have less disposable income to make purchases. Long lead times are also problematic for brands; they prevent agility and the ability to capitalise on demand."



The Woolmark Company's stand at ISPO also included some of the **latest wool innovations** co-developed by the company's in-house technical team. Pictured is AWI European Product Marketing Manager, **Rebecca Kelley**, in discussions at ISPO.

Product innovations

Thanks to the continued development of new technologies and machinery, there are many opportunities for wool in sports and outdoor markets. The Woolmark Company used its stand at ISPO to promote some of the latest innovations with wool.

For example, the rise of seamless garment knitting and flat knitting technologies is helping brands use Merino wool to better serve functionality and lessen environmental impact in the supply chain, driving new and exciting opportunities.

"Whilst not new, these processes produce technical, functional garments in Merino wool apparel that have been gaining ground during the past few years and it has now reached a point where there are a greater number of options on the market," Rebecca said.

With the versatility of knit, garments can be engineered into zones to cater for the different internal and external functional needs of the wearer. Hybrid garments that use a combination of knitted and woven substrates are also popular.

"New patterns have been developed that use body mapping – a design technique that enables different areas of the garment to be constructed to suit the shape, motion and functional requirements of the corresponding part of the body," Rebecca said.

"Seamless and flat knitting technologies are being employed to manufacture not only base-layer garments, but an extensive range of mid- and outer-layer garments."

Rebecca Kelley, AWI European Product Marketing Manager

Merino wool in footwear is an example of another area which is seeing growth, with the high-performance attributes of the fibre giving consumers the natural edge.

"The success of wool in footwear lies not only in the fibre's natural properties, but also in its ability to be constructed in a way that aids performance," Rebecca added.

The Wool Lab sourcing guide

A focal point of The Woolmark Company's stand at ISPO was the 'Endurance' theme of The Wool Lab sourcing guide, which was launched at the show.



Brands and retail buying teams viewing wool swatches in **The Wool Lab 'Endurance'** theme at The Woolmark Company's stand at ISPO.

This guide features 95 of the world's best commercially available technical fabrics and yarns for sports and performance, in particular: long-distance running, climbing, cycling and sailing. The range includes fabrics and yarns suitable for base-, mid- and outer-layers.

The 'Endurance' theme is one of six themes that comprise the full Spring/Summer 2024 season edition of The Wool Lab.

Since its inaugural edition nearly 12 years ago, The Wool Lab has become an important tool for the global textile industry and is helping to increase the demand and use of Australian wool globally.

"Each season, we reach out to The Woolmark Company's global supply chain network – quality-oriented spinners, knitters and weavers across the world – to source their latest fabric developments," explained AWI General Manager, Processing Innovation and Education Extension, Julie Davies.

"The Wool Lab is helping to inspire brands' material strategies and forge strong relationships within the supply chain, thereby increasing the demand for wool."

Julie Davies, AWI General Manager Processing Innovation & Education Extension

"With this, we curate a sourcing guide with a selection of the best textile and yarn swatches, which can then be ordered by designers and buyers directly from the manufacturers through The Wool Lab."

The full Spring/Summer 2024 season edition of The Wool Lab contains six themes and a total of 336 swatches – see www.woolmark.com/thewoollab.

The Woolmark Company's stand at ISPO was also used as the backdrop for the Woolmark Performance Challenge winners' presentation (see pages 38-39 overleaf).

WOOLMARK PERFORMANCE CHALLENGE

INNOVATIVE WOOL APPLICATIONS FOR SPORTS AND OUTDOOR

Woolmark Performance Challenge – since program launch

- 6,200+ tertiary students involved
- 300+ universities in 25 countries
- 1,250+ innovation ideas submitted

Unlike other competitions which are based solely on design aesthetics, the Woolmark Performance Challenge asks students to delve into fibre science and garment technology, while harnessing the unique natural properties of Australian Merino wool.

AWI's objective for the Woolmark Performance Challenge is to increase the demand for Australian Merino wool in the activewear sector. All entries to the competition must use a minimum of 50% Merino wool within their product composition.

AWI partners with sports and outdoor industry brands to amplify the messages about the competition and the performance benefits of Merino wool – and also to further embed appreciation for the fibre within the partner companies themselves. Past partners include leading sportswear company **adidas**, Norwegian-based outdoor apparel company **Helly Hansen**, Swiss running shoe and apparel brand **On**, and Italian mountain equipment brand **SALEWA**.

In 2022, the partner was French outdoor and sporting goods company **Salomon**. In 2023, the partner is the Italian sailing team **Luna Rossa Prada Pirelli** which competes in the America's Cup (see page 41).

First launched in 2018, the annual initiative continues to grow and has so far involved more than 6,200 students from more than 300 universities in 25 countries across the world.

Now in its sixth year, the Woolmark Performance Challenge is an annual competition for tertiary students from across the world to develop innovative new product applications for Merino wool within the sports and performance market. The winners of the 2022 competition were announced in November.

The Woolmark Performance Challenge thereby gives AWI and its partners access to a global pool of world class inventive minds.

The competition awards the winners with prizes including industry internships and ongoing training support, plus the opportunity to sell their idea to AWI or that year's competition partner.

"The Woolmark Performance Challenge has quickly cemented its rightful place as the world's leading ideas platform for the sports and performance market, harnessing innovative design and the technical nature of Merino wool to deliver innovative solutions to enhance the performance-wear market."

John Roberts, AWI CEO

Education about wool

As well as the Woolmark Performance Challenge being a competition to create innovative solutions for sports and outdoor, a key component of the initiative is to educate students about Merino wool.

Through a series of webinars by industry experts and sportspeople, AWI educates all the participating students about the attributes and benefits of the fibre – to not only arm them with information to assist in their competition entry, but to also encourage and inspire them to think about wool in their future careers.

Each of the 10 finalists also receive mentoring from industry heavyweights as part of a Woolmark Performance Challenge Accelerator Program, designed to accelerate their concepts and elevate their design thinking.

Innovative products from the 2022 Challenge

For the 2022 competition, students were challenged to explore next generation head-to-toe running kits for long-distance mountain runners.

There were entries from students at 191 universities across 25 countries. From these entries, 10 tertiary students were selected as finalists, with the three winners and all the finalists' innovative concepts announced in November at the ISPO sporting and outdoor goods trade show in Munich, Germany.

"Educating students about the amazing natural properties and benefits of wool is a priority. The Woolmark Performance Challenge is designed to evoke innovation in products and processes by next generations."

Julie Davies, AWI General Manager, Processing Innovation & Education Extension



The three winners of the 2022 Woolmark Performance Challenge (centre): **Michael Orlow**, **Chloe Jerolaman** and **Giulia Ciola**.

Pictured on the left are AWI General Manager, Processing Innovation & Education Extension, **Julie Davies**, and Salomon R&D Footwear Manager, **Florian Traullé**.

Pictured on the right are Salomon Sustainability Director, **Marie-Laurie Piednoir**, and AWI Regional Manager, Central & Eastern Europe, **Francesco Magri**.

Internship winner

Michael Orlow, University of Oregon, USA

Keradapt Merino: 3D printed waterproofing

Presenting an ideal solution for athletes undertaking a broad scope of challenging environments, Michael's innovative KERADAPT garments give a second life to leftover wool by using keratin processed from Merino wool waste blended with cellulose in 3D printed waterproof garments from organic tissue. A seamless whole garment print based on body scans and mapped for environmental and physical stress, Michael's innovative KERADAPT performance wear innovatively supports athletes in the most challenging of conditions and weather.

Michael has been awarded a three-month paid internship with Salomon.

"Michael was able to respond to the brief by transferring technologies from biomedical research. The proposal to mix wool with other natural fibres with new assembly processes opens a virgin field for sustainable innovation."

Florian Traullé, Salomon R&D Footwear Manager

Research Bursary winner

Giulia Ciola, Nuova Accademia di Belle Arti, Italy

Rapid Decomposing Merino

Beneficial to both nature and the human body, Giulia's innovation celebrates the lifecycle of garments that live, perish and decompose, reflecting the cycle of nature.

Giulia's innovation uses Merino wool and biomaterials in a functional, unisex, biological and biodegradable uniform for trail runners of the near future.

"Giulia's Rapid Decomposing Wool responds to a growing need and interest in sustainable solutions for the performance wear market, with a focus on enhancing biodiversity. Highlighting the eco-credentials, innate circularity and regenerative properties of the wool fibre, her focus on the full lifecycle of a product is very in touch with the future of performance wear."

Julie Davies, AWI General Manager, Processing Innovation & Education Extension

Adaptable Innovation Award winner

Chloe Jerolaman, University of Cincinnati, USA

Adapting to Athletes

Chloe championed the need for trail running garments that are inclusive and specially designed for athletes with disabilities.

Chloe has been awarded a three-month paid internship with Salomon.

"Chloe surprised us by exploring a theme outside of the initial brief, but it resonates with the inclusivity projects being explored at Salomon R&D. We want to develop this talent and nourish reflection by exploring the concept proposed by Chloe."

Florian Traullé, Salomon R&D Footwear Manager

The seven other finalists and concepts:

The other seven finalists and their concepts were:

- Ayush Verma, National Institute of Design, India
Bacterial leather
- Clint Worton, University of Oregon, USA
Sweat Activated Cooling
- Ellie Jones, De Montfort University, UK
Bacterial Battery
- Jack Dorrance, Utah State University, USA
Reflexion Base System – Panneling
- Lorenzo Caola, Istituto Europeo di Design – Milano, Italy
Movement Reactive Light Pulses
- Pietro Lo Presti, Politecnico di Milano, Italy
Auxetic Mycelium Fabric
- Rachel Moody, Nottingham Trent University, UK
Thermo-Chromic Comfort

In addition, the Woolmark Performance Challenge **Institution Award** is presented to one university each year, judged to have submitted the highest number of quality entries overall. The 2022 winner was the Albstadt-Sigmaringen University of Applied Sciences in Germany.

"The ten concepts selected as finalists showcase revolutionary, design-led thinking which can carve new opportunities for the sports and outdoor industry, and we encourage their adoption to explore their commercial viability."

John Roberts, AWI CEO

More information: Explore the forward-thinking concepts of all 10 finalists at www.woolmarkchallenge.com



**WOOLMARK PERFORMANCE
CHALLENGE**

LANA VELLO ACTIVEWEAR FROM THE WA WHEATBELT

Lana Vello, the activewear brand from the Central Wheatbelt of Western Australia, has launched its first men's garment – and it is made from 100% Merino wool grown locally in the Wheatbelt.



Founder Mikahla Wells from York in Western Australia wearing activewear from her Lana Vello brand.

The Lana Vello brand was launched nearly three years ago by Mikahla Wells who grew up on her family's farm in Wyalkatchem, a small farming community in the Central Wheatbelt of WA. She now lives at York where her husband, Mitchell, farms alongside his father.

Drawing its inspiration from regional Australia and Australian Merino wool, Lana Vello is primarily an online-based business selling activewear designed to be comfortable enough to be worn all day.

"Lana Vello was launched in June 2020 in the middle of the pandemic and kept on growing – last year I was a finalist in the AusMumpreneur awards. The brand focusses heavily on the incredible features of Australian Merino wool and aims to be authentic and inspiring," Mikahla said.

"I believe we stand out from our competitors because we really do live and breathe farming and Australian Merino wool. We run a sheep and cropping farm in Western Australia."

Lana Vello was launched with the aim to inspire the modern woman to lead a healthy, active lifestyle to feel their best. This year the brand has launched its first item for men, a 100% Merino wool singlet. In another first for her brand, the wool used in the product is sourced from a local wool-growing property.

The local Wheatbelt farmer who produced

the wool had been working alongside some university students on a project and was left with a number of rolls of 100% Merino wool fabric which had been processed in Italy. When he contacted Mikahla after hearing about her brand, she couldn't believe her luck.

"My dream for Lana Vello has always been to be able to source wool locally and to provide full traceability from sheep to shelf. It is a very in depth and lengthy process, but this farmer has allowed a taste of how this could look in the future and I am determined to make it happen," Mikahla said.

"The new men's singlets are incredible. Made from 17-micron wool, they look and feel great on, and I've had some really good feedback. I have had so much interest from men wanting woollen activewear, so it is exciting to branch out a little bit and this was the perfect opportunity to do so."

In addition to the men's singlet, there are currently two Lana Vello collections for women: the original 'Essentials' collection which includes a tank top, T-shirt and leggings; and the 'Sunset State of Mind' collection which is inspired by the dramatic Western Australian sunsets and includes bike shorts, muscle tanks and crop tops.

Mikahla says the brand's apparel meets the growing trend of consumers seeking garments that are suitable for both fitness and social settings.

"Comfort and versatility are everything. Lots of people don't have time to be changing outfits between morning workout and heading to town to run errands," she added.

"A lot of my marketing is based around educating people on the fibre. So many are astonished by its soft feel and summer styles. If you think about wool protecting a sheep through the vast weather conditions across Australia it becomes more comprehensible."

More information: www.lanavello.com.au



The brand's new garment for men, a singlet made from 100% Merino wool grown in the Wheatbelt of Western Australia (available in black and teal).

PRODUCT INNOVATION IN WOOL ACTIVEWEAR AT THE AMERICA'S CUP

AWI's marketing arm The Woolmark Company and the Luna Rossa Prada Pirelli sailing team have unveiled ground-breaking Merino wool technical garments to be worn by the team across all training and sailing activities, as it vies for victory during the 37th America's Cup to be held next year in Spain.

Following on from the highly successful showcase of Australian wool during the previous America's Cup, The Woolmark Company has returned as the official technical partner for the Luna Rossa Prada Pirelli sailing team.

The Woolmark Company has worked closely with the Luna Rossa Prada Pirelli product development team to expand the sailing team's current kit to include performance-first apparel for cycling, running and gym-based training activities.

Product innovation

The new custom-made kit includes Merino wool-rich T-shirts, hoodies, shorts, leggings, a cycling suit, a waterproof jacket and a revolutionary ultralight windbreaker. At just 60gsm, the 55% Merino wool windbreaker is wind-proof thanks to the density of the weave, and the presence of Merino wool ensures superior breathability.

The cycling suit has also been specially designed to meet the demanding conditions the Luna Rossa Prada Pirelli team will face. Using an innovative Merino wool-rich fabric, the interlock suit delivers enhanced temperature regulation and moisture management benefits, excelling in different weather conditions and intensity levels.

"Product innovation has once again been a crucial factor when designing the technical kit for the Luna Rossa Prada Pirelli team," explained AWI CEO John Roberts.

"With a focus on lightness, elasticity, strength and moisture wicking properties, our internal experts met with the Luna Rossa Prada Pirelli product development team armed with a selection of the best commercially available Merino wool fabrics. Where further development was needed, the teams worked together to create unique fabrics destined to deliver the added element."

Showcasing Australian wool

Through The Woolmark Company's support of the Luna Rossa Prada Pirelli team at the 36th America's Cup in 2021, Australian Merino wool was showcased to millions of potential customers, and significant interest was generated from global apparel brands that have since worked with AWI on product development initiatives.

With a focus on technical performance, and the added benefit of not contributing to microplastic pollution in the world's oceans, Merino wool proves to be the preferred fibre for Luna Rossa Prada Pirelli.

"The previous edition of the America's Cup proved how Merino wool is the perfect partner to ensure high-quality performances thanks to

its natural qualities. We are pleased to extend the presence of this 100% natural fibre also in the training uniforms, underlining once again the team's commitment to safeguarding the oceans," said Prada Group Marketing Director & Head of Corporate Social Responsibility, Lorenzo Bertelli.

More information: www.woolmark.com/americascup



The ground-breaking technical Merino apparel was unveiled in January to the public, business and the press at a special event during **Milan Fashion Week**, attended by 350 guests including more than 30 brands such as Armani, Gucci and Burberry. Pictured here are Prada Group Marketing Director & Head of Corporate Social Responsibility, **Lorenzo Bertelli**, with AWI Chief Marketing and Innovation Officer **Stuart McCullough**, Luna Rossa Prada Pirelli Team Director and Skipper, **Max Sirena**, and Luna Rossa Prada Pirelli sailors. The garments are being showcased by AWI at trade shows to create new business development opportunities for Australian wool.

What benefits does the partnership deliver to woolgrowers?

1. **Increased consumer awareness** of Australian wool's technical and environmental benefits amongst a global audience.
2. **Product sales** of Woolmark-branded sailing apparel and other activewear.
3. **New business opportunities** for global performance brands to work with The Woolmark Company's teams on product development with Australian Merino wool.

SUPER NATURAL RUNNER

TAKING STEPS TO HELP THE PLANET

Making sportswear more sustainable is at the heart of Circle Sportswear's mission. This is exemplified by the French brand's latest product: a world-first non-plastic running shoe, made using Australian Merino wool.

Founded in 2020, Circle Sportswear is a pioneering brand from France that has built up a range of apparel for running and yoga. In a new initiative, this year the brand partnered with AWI subsidiary The Woolmark Company to launch its first ever shoe... and it is made with Australian Merino wool.

Circle creates its sports products as part of the circular economy. This means the brand minimises the environmental impact of its products throughout their entire life cycle: from the products' creation to the end of their life.

The running shoe industry commonly uses synthetic materials and is therefore highly dependent on oil. The aim of Circle's new running shoe, named the SuperNatural Runner, is to disrupt the industry and get people running in shoes made from natural materials. The shoe is one of the very first on the market to be made entirely in Europe from biosourced, biodegradable and 100% recyclable materials.



Circle Sportswear's new running shoe, developed with help from The Woolmark Company, is made using Australian Merino wool.

"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."

"We have worked with biomechanical experts who have analysed more than one million strides to ensure the performance, lightness and comfort of this pair, which weighs less than 300 grams."

Romain Trebuil, Circle Sportswear CEO

All-natural components

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.

In keeping with circularity principles, each component of the shoe has been carefully selected so it doesn't create post-consumer waste at the end of its life: the upper is fully biodegradable, while the sole can be fully



recycled. People will be encouraged to send the shoes back to Circle after the shoes are eventually finished with, rather than throw them out.

The SuperNatural Runner, available in three colours, is being sold on pre-order to limit overproduction and manage stocks.

More information: www.circlesportswear.com

Did you know?

- 95% of the running shoes worn by France's 13 million runners are currently made of plastic.
- 125,000 tons of shoes each year are currently discarded in the trash – that is the equivalent to 13 Eiffel Towers!

Source: Circle Sportswear

The new Woolmark-certified shoe not only harnesses the eco benefits of Merino wool – a 100% natural, renewable, biodegradable and recyclable fibre that doesn't contribute to microplastic pollution. It also has natural performance benefits such as thermoregulation, moisture management, breathability and odour resistance.

"The use of wool in the footwear market is a relatively new development that has been driven by cooperative activity between The Woolmark Company and innovative manufacturers, such as Circle Sportswear on its SuperNatural Runner," said AWI Regional Manager Western Europe, Damien Pommeret.

Circle Sportswear success on French TV's Shark Tank



In great publicity for Merino wool, Circle Sportswear recently featured on the French version of *Shark Tank*, a TV show in which businesses pitch to a panel of investors. During their presentation, Circle Sportswear highlighted the SuperNatural Runner and that Merino wool is a key material in the shoe. Wool was prominently displayed on the set. Their presentation proved a success with famous French entrepreneur Anthony Bourbon choosing to invest €400,000 in the company. More than 1.8 million viewers tuned in to the episode, broadcast in January.

'WEAR WOOL, NOT FOSSIL FUEL'

ECO CAMPAIGN'S EXCELLENT RESULTS



AWI's marketing arm The Woolmark Company in September launched a powerful marketing campaign highlighting to consumers that synthetic fibres are made from oil, whereas wool is a 100% natural, renewable and biodegradable fibre. The global campaign urged consumers to consider the fibre composition of a clothing product – and choose wool – when they are thinking of making a purchase.

HIGHLIGHT RESULTS

92 million
video views (156% of goal)

643 million
impressions (181% of goal)

542,000 clicks
to the Woolmark website

"Excellent"
score for ad effectiveness



The campaign centres around a **60-second hero film** that shows people smothered and dripping in oil (representing clothing made from synthetic fibres) realising "it's time to change". They strip off their 'oil clothes' revealing them each now dressed in beautiful pure wool garments.

The Woolmark Company's environmentally focused global campaign 'Wear Wool, Not Fossil Fuel' had an amazing reception with strong and positive results.

The campaign video has been watched an incredible 92 million times. The digital campaign received 643 million impressions (which is the number of times the campaign advert was seen online or on outdoor advertising such as on billboards, bus shelters

and 3D Digital screens) and there were 542,000 online click-throughs to the campaign page on the Woolmark.com website.

The aim of the campaign was to educate the public about the harmful impact of synthetic fibres on the environment, and that choosing a natural fibre such as wool can help reduce the fashion industry's environmental footprint on the planet. Research shows that the campaign has been successful with surveyed consumers saying that it was very impactful:

- 79% said that the advert made them think twice about the environmental impact of their clothes.
- 78% said that, because of the advert, they would consider materials/fabrics when making a purchase decision regarding clothes.
- 80% said that, because of the advert, they believe wool is gentle on the environment.

Featuring a series of powerful visual messages that highlight the link between fabrics made from synthetic fibres and the crude oil used in its manufacture, the campaign centred around a 60-second hero film.

The impactful film shows people struggling to escape an oil-filled swimming pool, which is a dramatic visual based on the insight that every 25 minutes an Olympic pool's worth of crude oil is used to produce synthetic clothing (which amounts to almost 350 million barrels a year).

The video then sees the people wearing wool clothes, wandering with freedom through forests, streams and meadows – a natural paradise – which emphasises the natural attributes of the wool they are now wearing.

The campaign, which was being promoted via digital and social media, was also accompanied by visually striking 3D digital screen advertising in iconic sites in London's Piccadilly Circus and New York's Times Square, along with other global outdoor advertising in the UK, US, France, Australia, Italy and Germany, plus a partnership with popular computer file transfer company WeTransfer.

The campaign will roll out in Japan in early 2023.

These initiatives were Phase 1 of a larger multi-phase eco-marketing campaign from The Woolmark Company.

More information: www.woolmark.com/wear-wool

Why wool has less impact than synthetics

1. **Renewable** – Every year, sheep produce a new fleece, making wool a completely renewable fibre source. In contrast, synthetic fibres are derived from non-renewable petrochemicals and fossil fuels, which when extracted de-sequester carbon stored millions of years ago.
2. **Kept in use longer** – How often clothes are worn is the most influential factor in determining environmental impacts from clothing. Wool garments are on average kept in use for longer periods of time than garments made from other fibre types.
3. **Less washing** – Research shows that consumers wash wool clothing less frequently than other fibre types, saving water, energy and detergent associated with laundering.
4. **Reusable and recyclable** – Wool's attributes are so highly valued that, even after a garment has finished its long service life with one person, the fibre is still suitable to be kept in use by another. Wool is the most reused and recycled fibre on the planet of the major apparel fibres.
5. **Biodegradable** – Wool is made of a 100% natural biodegradable protein. In contrast, synthetic fibres do not biodegrade but instead accumulate in landfill and release microplastics in our oceans or on our land.

ONLINE RETAIL PARTNERSHIPS

With more and more apparel purchases being made online, AWI's marketing arm The Woolmark Company collaborates with the world's leading online retail platforms. Here and overleaf are some online retail partnerships during the recent northern hemisphere autumn/winter that highlighted the season's best wool apparel and built demand for the fibre.

Rakuten Fashion

For the first time, The Woolmark Company undertook a marketing collaboration with the largest e-commerce platform in Japan, Rakuten, promoting the massive selection of Merino wool apparel for consumers to buy on the Rakuten Fashion website during winter 2022.



Following a similar successful campaign last winter, The Woolmark Company once again extended its direct-to-consumer e-commerce campaign from the Chinese market (see opposite page) to the Japanese market for winter 2022.

The two-month campaign put Merino wool at the front of digitally savvy shoppers' minds – all with the aim to make Merino wool the most coveted apparel fibre for Japanese consumers during the winter season. The campaign involved still, and for the first time, video imagery shot specifically for the Japanese market. The assets were rolled out through a multi-channel digital and social campaign.

"The objective of the campaign was twofold: education and action. Firstly, to increase Japanese consumers' awareness of Merino wool's most relevant benefits in the Japanese market, specifically: biodegradability, easy to care for, durability, and thermo-regulation," said AWI Regional Manager Japan & Korea, Samuel Cockedey.

"The second important objective was to drive Japanese consumers to a dedicated wool

hub on Japanese e-commerce giant, Rakuten Fashion, which showcased Merino wool products available for purchase. With more than 580 brands promoting a massive 1.5 million wool rich products to Rakuten's huge audience, this was the largest campaign of this type we have ever conducted in the Japanese market."

The campaign performed extremely well, with the four educational videos viewed 20.7 million times and the whole campaign achieving an incredible 1.2 billion impressions (the number of times the campaign was seen online).

"The campaign performed extremely well in line with both objectives. It yielded a significant 12.9% uplift in sales of the partner's wool category, totaling A\$26 million in sales."

**Samuel Cockedey, AWI Regional Manager
Japan & Korea**

As well as a wool hub and campaign banners on its website, Rakuten Fashion also promoted the campaign via a series of e-newsletters

to its mailing list of approximately 4 million people, push notifications to its app which has 1 million downloads, and posts to its social media channels.

"Crucially, the campaign yielded a significant 12.9% uplift in sales of wool rich products, totaling A\$26 million in sales. These results haven't gone unnoticed by Rakuten which has already offered to work on another campaign next winter," Samuel added.

More information: brandavenue.rakuten.co.jp/contents/woolmark

HIGHLIGHT RESULTS

- 1.2 billion+ impressions
- 20.7 million video views
- 1.5 million wool rich products promoted
- 12.9% uplift in wool sales

天猫 TMALL.COM

Lane Crawford

NET-A-PORTER

FARFETCH

This year's Autumn/Winter campaign in China by The Woolmark Company positioned Australian Merino wool as a premium natural fibre, with promotions that include exciting firsts as well as proven strategies involving leading brands showcasing their wool products.



As reported in the December edition of *Beyond the Bale*, The Woolmark Company's Autumn/Winter marketing campaign in China built on its successful campaigns in previous years to bring high-quality and fashionable wool apparel to consumers in China.

Sitting under the umbrella theme of 'Merino

wool, live with nature', keywords throughout this season's campaign include: circularity, sustainability, durability and machine-washable, in addition to the three key pillars of wool being natural, renewable and biodegradable.

A key part of the campaign was the launch of a 60-second video, titled *Much Loved*, featuring Chinese actress Ruonan Zhang. The short video captures the complete life cycle of wool yarn, treating it as a vehicle for passing on fond memories of families, loved ones and friends over different seasons and stages of life.

The video debuted in September and featured across e-commerce, social media and online entertainment platforms including TMALL, Weibo, WeChat, Douyin and Little Red Book.

The 2022 Autumn/Winter program expanded its coverage from previous years to feature four of the world's leading online and offline retail platforms joined by more than a thousand brand partnerships.

As it did in the previous three Autumn/Winter seasons, China's most influential business-to-consumer e-commerce platform, TMALL, launched the 'Wool Pavillion' promotion on its platform in September, featuring brand partners, designers, and key products as part of its e-commerce campaign and as a lead-up to the Double 11 online shopping extravaganza. Double 11 (also known as Singles' Day) is an

online shopping festival held on 11 November in China that is similar, in some ways, to Black Friday in Western nations.

Strategic retail partnerships with heavy hitters including Farfetch, Lane Crawford and Net-a-Porter saw a combination of online and offline event, media and retail activations that kicked off in September, with some extended until Christmas to maximise wool garment sales.

The Woolmark Company's first-ever advertising on 3D digital billboards in China were rolled out in busy areas of the fashion megacities of Shanghai and Chengdu, providing a powerful visual experience that highlighted the versatility and beauty of Merino wool.

HIGHLIGHT RESULTS

- 1.35 billion impressions
- 68 million video views
- 20%+ uplift in wool sales on TMALL
- 23.7% increase in awareness of Merino wool amongst the general public in China

ONLINE RETAIL PARTNERSHIPS ARTICLE CONTINUES ON THE NEXT PAGE >



Woolmark's Spring/Summer campaign wins eco award in China

The Woolmark Company's 2022 Spring/Summer 'Nest Starter' campaign won the Sustainable Fashion Communication Influence Award at the Green Challenge in Shanghai.

The campaign featured an eco-friendly art installation filled with wool that offered the hundreds of wild bird species in Laojunshan Nature Reserve in Yunnan the perfect material, wool, to line their nests in preparation for the breeding season.

Initiated by the China National Textile and Apparel Council and Textile Go Green, Green Challenge is supported by well-known organisations and institutions such as the World Wide Fund for Nature (WWF), *Women's Wear Daily* (WWD), *ELLE China* and Donghua University.

As an important event to promote the green transformation of China's textile industry, Green Challenge celebrates the designers and brands that have made contributions in the field of sustainable fashion. Industry leaders, institutions, well-known brands, entrepreneurs and journalists attended the award ceremony.

< ARTICLE CONTINUED FROM THE PREVIOUS PAGE

Saks Fifth Avenue

For the first time, The Woolmark Company has run a joint marketing campaign with the popular online shopping destination of the famous Saks Fifth Avenue store in the USA, to promote Merino wool apparel and products for the home.

Saks Fifth Avenue is an American luxury department store chain headquartered in New York City. It is a fashion icon with an extraordinary heritage. Since 1924, Saks has delivered one-of-a-kind luxury shopping experiences making it the international fashion authority it is today.

For six weeks in November and December 2022, Saks partnered with The Woolmark Company on a fully integrated digital and social media campaign that positioned Merino wool as the finest and softest wool in the world, and generated awareness of Merino wool products on Saks.com.

Saks created editorial content, fully integrated into the digital shopping experience, with brand messaging and education about Merino wool strategically placed throughout Saks.com. The content included a custom partnership landing page, and a custom product array page with a branded top banner.

The partnership also included a Saks Live event with influencer Thania Peck of Catcher in the Style (106K followers on Instagram) to enhance awareness for the partnership and to highlight Merino wool styles available at Saks.

Thania styled looks with Merino wool pieces in addition to highlighting some of the top reasons she wears Merino wool. The Saks Live event came together as a dynamic and shoppable livestream, where viewers could interact with her through a dedicated chat box, while simultaneously shop her curated selections.

HIGHLIGHT RESULTS

- 23 million impressions
- 1.6 million visits to custom landing page and product array
- +74% total Saks.com wool sales compared to previous 6-week period



The Saks Live event with influencer Thania Peck who highlighted shoppable Merino wool styles.

“Consider Merino wool our go-to due to its ultra-soft texture and temperature-regulating warmth. While it’s a popular cold-weather fabric, there’s no reason it can’t be worn all year. We’re here to prove that the oh-so-cozy fabric is for winter – and beyond.”

Saks Fifth Avenue

More information: www.saksfifthavenue.com



Banner used in a Saks email campaign promoting the benefits of Merino wool and pointing to wool products to buy

goop

The Woolmark Company partnered with Goop, the lifestyle brand and retailer founded by American actress Gwyneth Paltrow, to showcase Merino wool apparel in a ‘Read + Shop’ feature on the brand’s website.



Gwyneth Paltrow modelling two of the 100% Merino wool products by Goop’s G.Label that featured in the collaborative online promotion.

“When it comes to clothing, Merino wool tends to outperform the rest. Not only is it super soft, moisture wicking and odor resistant, Merino wool is biodegradable, so that at the end of its life cycle, it will return to the earth. Naturally, we partnered with The Woolmark Company.”

Goop



An extract from the '4 Ways to Go All In on Texture' Read + Shop **wool feature** on Goop.com.

In 2008, American actress Gwyneth Paltrow launched Goop as a homespun weekly newsletter. Since that time, Goop has grown into an educational wellness empire and expanded into e-commerce.

From 25 October to 31 December, Goop partnered with The Woolmark Company on a Read + Shop feature on the brand's website. The custom editorial content featured wool pieces and how to style them for four different occasions – for the office, a night out, the weekend, and staying in – alongside a promotion of the benefits of wool.

Visitors to the Goop website spent 40% longer engaged with the content than the average time readers usually spend on Goop's editorial content. Importantly, the editorial pointed directly to where readers could then purchase the wool pieces online.

The wool promotion was featured in Goop's e-newsletter that was distributed to the brand's massive database of customers. The e-newsletter had a 76% open rate, which is four times the industry average.

Wool was also highlighted on Goop's Instagram channel (which has an audience of 1.7 million followers), driving people to purchase the Merino wool products on Goop.com. There was a custom Instagram story which featured Merino wool products with education around wool being thermoregulating and cozy.

HIGHLIGHT RESULTS

- 2.5 million impressions
- +100% year-on-year increase in wool styles

More information: www.goop.com/style/outfitting-ideas/fall-texture-story/



Europe's largest online fashion retailer, Zalando, has showcased Merino wool to its customers to increase purchases of apparel products made from the fibre.



Content creator and artist **Johanna Rayla** featured on Zalando's wool hub providing customers with insights into her favourite wool styles.

Founded in 2008 in Berlin, Zalando is Europe's leading online fashion platform, delivering to customers in 25 countries. In its fashion store, consumers can find a wide assortment of products from more than 6,500 brands. The online platform has more than 50 million active customers.

Following successful marketing collaborations with Zalando in the past two years, The Woolmark Company has once again collaborated with the fashion retailer in a campaign, which ran through the month of December, to increase awareness of Merino wool's benefits and increase sales of Merino wool womenswear.

The campaign generated sales of products valued at A\$3.1 million, up 218% on last year.

In a promotion titled 'Timeless in wool', a wool hub was created and promoted on the Zalando website and app. Here, customers were able to learn about the benefits of wool, see highlighted wool products and be directed to the online shop for purchase.

The content was translated for local language sites, with the campaign focussed on Germany, Switzerland, Austria, Belgium, France and Italy due to strong returns and engagement in those markets.

As with last year's campaign, the wool hub features the home of a Berliner – Johanna Rayla, a content creator and artist. Johanna provides insights into her favourite styles and thoughts on wool. This provided an authentic way to communicate the message of Merino wool and drive consideration to purchase wool apparel products.

"Wool for me is not just a material, but a feeling. When I wear wool, I feel warmth, wellbeing and comfort."

Johanna Rayla, on Zalando

HIGHLIGHT RESULTS

- 25.5 million impressions (29% YOY increase)
- 2.2 million product detail page views (210% YOY increase)
- A\$3.1 million worth of revenue (218% YOY increase)

More information: www.zalando.com

HATS OFF TO HONEST WOOL TRACEABILITY INITIATIVE

Australian based fashion accessories brand Helen Kaminski has launched a traceability initiative in which the Merino wool used in the brand's Conscious collection of hats is sourced from wool-growing property Barunah Plains in Victoria.



The Merino wool used in the **Helen Kaminski** brand's Woolmark-certified Conscious collection of hats is traceable to a single property in Victoria.

Founded in Australia in 1983, Helen Kaminski is a globally coveted brand renowned for beautiful, modern accessories that inspire confidence, reflect individual style, and are handcrafted to last. Each piece is made with special care by artisans, handcrafted using traditional techniques and the finest raw materials. The brand's distinctive and unique collection of designs have been worn by celebrities and influencers around the globe.

Under the vision of head of design and development Pernille Sejer, the brand continues to celebrate the optimistic spirit of Australian design, craftsmanship and commitment to sustainability.

The brand is working towards greater supply chain visibility so consumers can see that its accessories are not only crafted with expertise and care, but also with our planet in mind, helping to create a more sustainable future.

Merino wool Conscious collection of hats

The brand's ultra-fine wool felt Conscious collection encapsulates Helen Kaminski's considered and mindful use of materials. The 'hat hoods' used in the collection are made from traceable and responsibly sourced pure Merino wool from wool-growing property Barunah Plains, located about 40kms west of Geelong, Victoria.

Helen Kaminski's Honest Wool initiative is part of the brand's ongoing commitment to creating ethical, everyday luxury: one that leaves a positive impact on animals, people and the planet.

"My design team are proud to be working with pure Merino wool and the customers are responding so well to the fibre that it has become a true staple at Helen Kaminski," said Pernille.

Transparency through the supply chain

Knowing where, and how, the products we wear are made is more important than ever, and transparency is key. The pure Australian Merino wool used in the brand's Conscious collection is entirely traceable.

After shearing at Barunah Plains, the wool is cleaned and scoured at E.P. Robinson in Geelong before being sent to Italy for carding and combing. The wool is rolled and felted in Portugal using heritage techniques and machinery to give a tightly woven, luxurious feel. The hat hoods then travel the short distance to Spain where they are shaped by hand into hats before they are transported to Helen Kaminski global distribution hubs.

Each carefully handcrafted hat in the collection is Woolmark-certified and embodies lasting everyday luxury.

Barunah Plains

Nestled amongst a tapestry of rolling pastures and beautifully restored heritage buildings, Barunah Plains is home to more than 2,500 Merinos.

Regenerative farming and positive animal welfare led to the Helen Kaminski brand's partnership with woolgrower Damian Canny of

Barunah Plains Pastoral Company to supply the Merino wool for the brand's Conscious collection.

"We immediately fell in love with Barunah Plains and with Damian's approach to business and farming. Unlike wool from other parts of the world, Barunah Plains is not just 100% Australian Merino: it's completely pure and entirely traceable," said Pernille.

Damian has been growing wool for nearly 20 years and he's passionate about building and promoting the positive eco-credentials of wool at Barunah Plains.

"We look after the land by not stocking it too heavily. If we're running out of feed, we look somewhere else to put our livestock for a period of time to let the land regenerate," Damian said.

"We keep our eye on noxious weeds and the creek that runs through Barunah Plains. We try to look after the land as best we can and leave it in a better way than how we found it.

"In terms of traceability, knowing where something comes from – especially when it involves an animal, is ethically important. When you can see the 'thread' of the whole story, you know that it's positive."

More information: www.helenkaminski.com.au



Owner of Barunah Plains, **Damian Canny**, and one of his three daughters inspecting some of the property's Merinos.



TAMBO TEDDIES TURNS 30

Tambo Teddies are Woolmark-certified 100% wool sheepskin teddies hand-crafted in the Queensland outback town of Tambo. More than 68,000 Tambo Teddies have been sold since the first one was made thirty years ago back in 1993.



*Tambo Teddies is run by **Tammy Johnson** and **Alison Shaw**, pictured here in their shop on the main street of **Tambo**, Queensland.*

The inspiration for Tambo Teddies began in 1992: wool prices had crashed, the district was in the grip of a drought and the community of Tambo was challenged to come up with new industry to sustain the economy of the little town.

To help the ailing wool industry and local farmers plus attract tourists to Tambo, a brain-storming session during a government workshop spawned the idea of creating teddy bears from Australian sheepskin and stuffing them with Australian wool.

The original outback start-up

Helen Sargood, Charm Ryrie and Mary Sutherland were the pioneers who got together and decided to form a teddy bear company. After nearly a year of extensive planning, designing, trial and error, the first bears were ready for market in early 1993.

Long before the days of the internet and googling were commonplace, these three local entrepreneurs gave the Yellow Pages and the phone a workout sourcing supplies and raw materials.

Promotion was similarly challenging; Helen's main role in the business was the marketing of the bears and she travelled many miles carting bears to shows and exhibitions, remarking, "I wore out at least one car promoting those bears around the countryside".

Tambo Teddies celebrates 30 years of success

Working to establish a business from what was considered a quirky idea, their efforts paid off and Tambo Teddies has put Tambo on the map. Today in 2023, there have been more than 68,000 bears crafted with sheepskins. Tambo Teddies take pride of place in homes across the world, even including royal palaces in England and Denmark.

Tammy Johnson and Alison Shaw have been at the helm since 2014 and have implemented new products, ideas and methods including expansion online and into Toowoomba with a Regional Sewing Hub. They say the impact and enthusiasm of the public over the years has been overwhelming, with the business now employing 16 workers and keeping true to its Australian made origins.

"We believe we have a great core product that customers adore; we continue to build upon this and are working to take our bears further

across Australia and overseas, and at the same time helping to promote Tambo and Outback Queensland," Tammy said.

To commemorate its significant 30-year milestone, a limited-edition bear was released in February, the Banjo bear. Among other new releases early this year are a line of Branded Bears, and the largest Tambo Ted, a shaggy Goliath, crafted from long, fluffy sheepskins and the size of a small child.

More information: To purchase online, head to www.tamboteddies.com.au

Since the first Tambo Teddies were made in 1993, more than 68,000 teddy bears have been sold.



VOLVO CARS' NEW WOOLMARK-CERTIFIED INTERIORS

Since it was founded in 1927, Volvo has grown to be one of the most respected car brands in the world with sales now in more than 100 countries. Last year, Volvo Cars introduced Woolmark-certified wool blend fabric into several of its models.



The Woolmark-certified interior of the **Volvo XC90** showing the seat cover carrying the **Wool Blend Performance label**, having been certified for quality according to The Woolmark Company's strict assessment criteria.

Swedish car manufacturer Volvo Cars has always been well known for its focus on the safety of its cars' drivers and passengers. More recently, the company has added the safety of the planet to its guiding principles with a strong commitment to sustainability. Volvo Cars aims for all its new cars to be fully electric by 2030 and for the company itself to become a circular business and climate-neutral by 2040.

This commitment to sustainability extends to the interior of its cars. In 2020, Volvo Cars introduced the option of tailored wool blend upholstery into several of its models and has continued to expand its use of the fabric, including in the EX90, Volvo Cars' new



The interior of the **Volvo XC60** with its woolmark-certified wool blend fabric.



Volvo's first ever fully electric car, the **XC40 Recharge**, which has Woolmark-certified wool blend interiors.

"At Volvo Cars, we take customer well-being as a design starting point. Introducing Woolmark-certified wool blend fabric into our car line-up is an important step in our journey to redefine automotive luxury."

Cecilia Stark, Senior Design Manager, Volvo Cars

fully electric SUV. Volvo Cars states that the upholstery represents a "respectful connection to natural materials".

The whole supply chain of the upholstery is Woolmark-certified and the company itself last year became a Woolmark licensee and introduced the Wool Blend Performance label prominently on its seat covers.

As well as its well-known eco-credentials, wool provides the upholstery with performance benefits, such as comfort and breathability,

for the driver and passengers. In winter, the seating will not feel cold – and in summer, it will not get too hot.

The Woolmark Company was included in the product development of the fabric, which is made in Europe from a blend of 30% new wool and 70% polyester.

More information: www.volvocars.com



REPORT INTO EXPANDING WOOL PROCESSING IN AUSTRALIA

According to a new Government-funded economic analysis, early-stage wool processing could be expanded in Australia at internationally competitive rates, but it would require significant capital investment.



The Australian wool industry currently exports most of its production in unprocessed 'greasy' form, with the overwhelming majority sent to China. It hasn't always been this way. As recently as the 1990s, half of the nation's wool clip was early-stage processed into wool tops in Australia prior to export. At the time, the wool processing industry relied on significant Government subsidies. The removal of these, alongside the rising competitiveness of China, meant most processing moved offshore.

Of the fifteen Australian companies that carried out early-stage processing of wool in the early 2000s, just three scours remain, with no large-scale top making facilities. In the three years to 2021-22, these three companies processed just 5.2% of the value of Australian wool exported.

However, in the wake of recent global supply chain disruptions, geopolitical shifts, and outbreaks of infectious disease in Australia's near neighbours, concerns are growing about the trade risks associated with the Australian wool industry's reliance on early-stage processing that is concentrated in a small number of offshore countries.

In response, AWI and other wool industry bodies have worked on a WoolProducers Australia-led project aimed at identifying opportunities to mitigate and reduce these risks faced by the industry.

WoolProducers Australia was awarded a \$662,000 grant in November 2021 as part of the Australian Government's Agricultural Trade and Market Access Cooperation program to carry out the project. The work was undertaken by

Deloitte Access Economics, which completed its report in November.

Competitiveness of wool processed in Australia

The report concluded that an expansion of early-stage processing in Australia could significantly reduce the trade risk to our industry as a result of a reduction in greasy wool exports caused by, for instance, an outbreak of foot and mouth disease in Australia, or the imposition of tariffs or other regulatory measures that restrict trade in some way.

Furthermore, the report stated that Australia could be cost competitive in delivering early-stage processed wool to global customers. It said that, while early-stage processing is more expensive in Australia (primarily due to higher wages than overseas), considerably cheaper sea freight from Australia to downstream customers would offset these costs. As a result, the total cost delivered to customers is broadly similar when compared to the current supply chain. Exporting processed wool would also reduce transport carbon emissions, as scouring removes around half to a third of greasy wool weight through the removal of grease, soil and other contaminants.

Fundamentally, the analysis showed that cost of production is not a material barrier to expanding processing in Australia. If driven by export demand, an expansion of early-stage processing in Australia could be internationally competitive and would have a positive impact on the Australian wool industry and the wider economy.

The report said that Australia's competitive advantage lies in wet processing (scouring, or scouring and carbonising). Scoured wool could be exported to diverse markets around the world at an approximate 1% price advantage compared with the current supply chain. This advantage is reduced if undertaking the additional step of top making, but could still be broadly competitive.

The report identified four priority markets for the diversification of Australian wool exports. They are India, Vietnam, Bangladesh and Indonesia – all have significant future growth potential and relatively congenial regulatory controls. While these four markets have strong textile sectors, the report noted that their primary focus is currently on synthetic

fibres and cotton, with little wool production. Therefore, there is a need to develop relevant wool processing skills and infrastructure in these target countries.

Capital investment would be needed

The report stated the expansion of wool processing in Australia would require significant capital outlay. Part of the expansion of wool processing in Australia could be achieved by local companies. But the report said that it is most likely to require new entrants into the Australian market, which would also bring challenges of integration and competition.

Locating the necessary investment is expected to be a significant challenge. International commercial and institutional investments are not currently a feature of the Australian wool trade, and the pool of potential investors is limited, both here and internationally. This is partly due to technical barriers but, for potential investors, it is often the case that the more technical a process, the more uncertain the ability to recover costs.

Based on its analysis, Deloitte Access Economics said there is a reasonable case for government support to underwrite the future of the Australian wool industry.

Deloitte Access Economics was guided throughout the project by an industry steering committee. Membership comprised of representatives from WoolProducers Australia, Australian Wool Innovation, Australian Council of Wool Exporters and Processors, National Council of Wool Selling Brokers of Australia, Australian Wool Testing Authority and Australian Wool Exchange and Austrade.

Work continues on this feasibility project to ensure a sustainable future for our industry.

More information: www.woolproducers.com.au

Hear WoolProducers Australia General Manager Adam Dawes talk through the report in Episode 233 of AWI's The Yarn podcast at www.wool.com/podcast



FUTURE-PROOFING AUSTRALIAN WOOL

AWI is helping to reduce the risk of Australian wool relying on a limited number of processing and manufacturing markets, by helping to open up new and expanding destinations for Australian wool. Here we provide a snapshot of three of these nearby countries.

India – a large partner of Australian wool



After China, India is one of the largest and most important importers of Australian wool. India processes a total of 110-130 million kgs of wool annually, with Australia being the primary source of apparel wool. The country is well-known for its premium textile manufacturing, with the textile sector contributing almost 7% of India's manufacturing output and 12% of its exports. The Indian government has been pushing for textile industry growth.

India not only has a supply chain of quality spinners, weavers, knitters and garment makers, but also has a strong base of handloom and handknitting, craft and artisans, and natural dyeing techniques. About 40-50% of wool processed wool in India is consumed domestically.



AWI CEO John Roberts giving a speech on 24 November to the Indian textile and fashion sector at a 'Grown in Australia. Made in India' event at the Australian High Commission in New Delhi. The event was held to mark 50 plus years of The Woolmark Company working in India. The event was held in conjunction with Austrade and the Australia India Business Exchange.

The Woolmark Company has operated in India for more than 50 years, working with multiple partners in many stages of the wool supply chain, from early-stage processors, spinners, weavers and knitters through to brands and retailers. The company's work in this country extends to education, research and development, and the marketing of Australian wool to ensure its ongoing place in the textile industry and growing consumer market.

"The Woolmark Company plays a critical role in driving the increased take up of wool in the

"The Woolmark Company plays a critical role in driving the increased take up of wool in the Indian garment and textile industry."

John Southwell, Trade and Investment Commissioner, Austrade India

Indian garment and textile industry and we are pleased to support their endeavours in the country. We are delighted to partner with them all the way to ensure better economic returns to Australia's woolgrowers – and those who support them," said Trade and Investment Commissioner, Austrade India, John Southwell.

In December, the new Australia-India Economic Cooperation and Trade Agreement (ECTA) came into force which includes the elimination of the 2.5% tariff on Australian wool imports into India.

"The elimination of Indian tariffs on wool improves the terms of trade for Australia's wool exporters and will enable better economic returns to our wool producers and those who participate in Australia's wool industry across the supply chain, as well as the rural communities that support it," Mr Southwell added.

In another boost for Australian wool, The Woolmark Company is developing a new capacity building project in India which aims to help knitters and weavers in India learn about new technologies in wool which they can incorporate in their production.

Bangladesh – a growing hot spot for sourcing



Bangladesh has emerged as a powerful garment manufacturing country in the past decade, with the country's textile industry being the third largest apparel exporter in the world (after China and the EU), accounting for 6.4% of world apparel exports in 2021.

The 2021 McKinsey global survey of apparel chief purchasing officers ranked Bangladesh as the No.1 hotspot for sourcing potential over the next several years. Bangladesh is a growing source for traditional wool knitwear for many big-name brands across the world that have established sourcing offices there.

Already recognising the steady growth of the Bangladesh textile sector and its potential for

more wool manufacturing (especially knitwear), The Woolmark Company in 2020 began to look more closely and proactively at Bangladesh as an emerging market for wool. Since then, the company has increased its reach there by, for instance, holding several webinars for current and potential supply chain partners to help them see the benefits of working with Australian wool.

The Woolmark Company will soon be running a short wool staple trial with some cotton spinners in Bangladesh, in which wool will be put on a cotton spinning system to create wool/cotton blend yarns. It is anticipated that this will help cotton spinners incorporate wool into their production lines.

Vietnam – interest in wool textiles grows



The Vietnam textile industry is the fourth largest apparel exporter in the world (after China, the EU and Bangladesh), accounting for 5.8% of world apparel exports in 2021. AWI first identified Vietnam as an emerging manufacturing hub for wool textiles in 2012 when the Vietnam textile industry began to focus on moving toward high-quality products and production.

Since then, AWI has worked closely with partners throughout the supply chain. AWI has transferred technical knowhow about the manufacturing of wool products, disseminated information about sources of raw materials and machines, and organised international trade missions to connect project partners with buyers.

AWI currently collaborates with about 100 partners including flatbed knitters, circular knitters and garment making companies. In recent years, AWI has also worked with Vietnamese domestic brands to produce their first wool collections which have successfully sold in the domestic market.

The country now boasts a robust wool supply chain including spinning, weaving, knitting and whole garment manufacturing. This vertical integration means designers, brands and buyers can source all their garment requirements from the one country, cutting out logistical times and dealing with many suppliers.

In 2023, AWI plans to increase its activities in Vietnam such as participation in its

first tradeshow in Hanoi, working with two local brands on their wool collections, and partnering with Austrade in Vietnam for Vietnam Fashion Week to showcase Australian fibres and celebrate 50 years of cooperation between Australia and Vietnam.

Circular Knitters Tour in Vietnam

In November, The Woolmark Company and the Südwolle Group held a 'Circular Knitters Tour' at the Da Lat Worsted Spinning (DWS) mill (part of the Südwolle Group) in Vietnam, with the aim of increasing the use of wool in circular knitting in Vietnam. There were more than 100 people present, including more than 40 visitors from 16 circular knitters in Vietnam. The knitters on the tour were mostly cotton knitters who had little previous experience of using wool in their factories but were interested in expanding their product offering.

During the tour, they had the opportunity to hear from experts in wool circular knitting and connect with supply chain partners. The day included presentations by Südwolle Group, The Woolmark Company and circular knitter Designer Textiles Vietnam, followed by a tour of the state-of-the-art DWS spinning facilities and a wool fashion show by design students.

"The Woolmark Company was integral to supporting the tour and we benefited from their supply chain connections within this market."

**Alessandro Di Palma,
General Manager of DWS**

Feedback from the attendees was very positive with the majority saying they learnt a lot about wool and found the tour very valuable. Additionally, nine of the circular knitters who attended the tour have now started wool knitting trials using DWS yarn with ongoing technical support from The Woolmark Company's technical team.

"The tour gave Da Lat Worsted Spinning a really good chance to build our relationships with circular knitters in Vietnam and it was also an opportunity for us to expand our wool business in the Vietnam market," said the General Manager of DWS, Alessandro Di Palma.



AUSSIE EDUCATORS DRESSED IN WOOL

AWI helped ensure all the conference shirts at the National Association of Agricultural Educators (NAEE) 2023 Conference were made from Australian Merino wool. They look great and are helping teachers spread positive conversations about wool now they are back in their classrooms with their students.



The delegates at the National Association of Agricultural Educators 2023 Conference wearing their Australian Merino wool conference shirts from TheMerinoPolo.

To demonstrate the versatility and comfort of Merino wool, the entire delegation of more than 100 educators attending the NAEE Conference, held in Toowoomba in January, were kitted out in Merino wool polo shirts from TheMerinoPolo, with support from AWI.

Recognising the trend towards a more casual style of apparel in the workplace, TheMerinoPolo was launched in 2021 by WA wool buyer Steve Noa who used his experience of 30 years in the wool industry to launch the range of Woolmark-certified Australian Merino wool polo shirts. He markets the shirts as the natural alternative to synthetic polo shirts, at a price people can afford.

As well as being available for individual purchase, Steve sells TheMerinoPolo at bulk discount rates to corporates, clubs and businesses, complete with their own logo. For example, all the shirts at the NAEE Conference had the AWI and NAEE logos on them.

Last year was a huge year for TheMerinoPolo, with more than 42 businesses and organisations making the switch from synthetic polos to the company's high quality Merino polos.

"The polo shirt has now become the smart casual essential for business, sport and pleasure. It is so incredibly versatile, but the market has been sadly dominated by the polluting synthetic and cotton textile industries. These polos fit poorly, leave your body suffocating in warm weather or under physical load and require constant washing while remaining in landfill for who knows how long," Steve said.

"TheMerinoPolo is revolutionising the workplace. It is a versatile, stylish, comfortable and high-quality polo shirt – and because it is made from wool, it has excellent odour resistance. The shirt is made at one of the most advanced wool knitting mills in the world, at a price comparable to synthetics."

More information: www.themerinopolo.com.au

Wool resources showcased at the NAEE Conference

The NAEE Conference was a great opportunity for education professionals to learn about the latest ag teaching resources and keep up to date with what's happening in classrooms across the country.

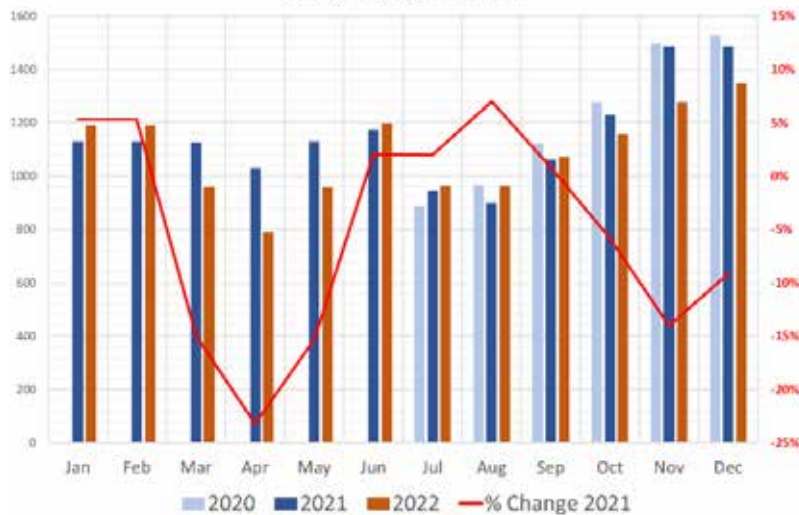
At the conference, AWI showcased its own educational resources which span the breadth of the Australian wool industry, from farm to fashion. AWI resources include:

- **Learn About Wool** – a free platform that contains a wealth of resources, lesson plans and activities for teachers and students from early childhood through to senior secondary years. See www.learnaboutwool.com
- **The Woolmark Learning Centre** – a free web-based hub that houses world-class educational resources about wool for learners at all levels, including those entering the global textile industry as well as those already in it. See www.woolmarklearningcentre.com

MARKET INTELLIGENCE REPORT

CHINA CONSUMPTION TRENDS POST ZERO-COVID REGIME

CHINA: Total Retail Sales of Garments, Hats & Footwear
Absolute Value (100 million yuan)



Source: National Bureau of Statistics of China

Disruptions caused by COVID-19 and China's stringent measures against the pandemic dampened consumer confidence during 2022. Total retail sales of consumer goods were 43,973.3 billion yuan, a decrease of 0.2% over the previous year.

Key months where retail sales decreased coincided with those months of hard lockdown (March-May) – and the increasing unrest at the end of the year. While in-store shopping struggled, online sales increased during the year, somewhat reflecting the similar experience of Western nations during their lockdowns, with retail sales of clothing in China growing by 3.5% during the year.

Positive consumer change for 2023

After three years of strict pandemic control, economic prospects in the country are now looking up after China put its downgraded COVID measures into force recently and the nation began to resume normal life.

Furthermore, the country has reopened its borders for cargo transportation as well as inbound and outbound visitors, following the dropping of quarantine policies from 8 January.

A series of measures to boost consumption has been introduced to stimulate consumers' spending, unleash the potential of domestic demand and boost economic growth.

During the first holiday after the change of

COVID policy, consumption picked up sending a positive signal that the Chinese economy is back on the upswing.

It is expected that consumption in the first quarter of 2023 will form a small peak. This is mainly due to consumption during the New Year holiday and Chinese New Year holiday, along with the initial effect of the restrictions of epidemic prevention and control being eased.

On the whole, the high consumption trend in the first quarter will lay a good foundation for economic stabilisation and recovery throughout the year, further stimulating the vitality of market players.

Experts predict that consumer market growth will improve significantly during the year, with consumer spending expected to grow by 8-12% and total retail sales of consumer goods by 7-11% in 2023. In comparison, total retail sales of consumer goods grew by an average of 4% over the two years for 2020-2021.



China production on the up

Some factories (spinners and weavers) said they were running at almost full capacity in December, producing to complete previously contracted orders and deliver the goods before the end of the year.

However, as China ended its stringent zero-COVID policy, the number of workers that were infected with COVID-19 gradually increased, with some factories becoming thinly staffed by the end of December. Production and logistics became relatively slow.

But with the return of recovered workers in early January, production has now been ramped back up. Experts say that after the adjustment of the epidemic prevention and control policy, production looks to further increase, especially in the export market, and good orders from Japan, India and Italy are likely to see production return to full capacity.

The figures in this article are sourced from data and analytics company GlobalData.



AVERAGE MONTHLY EMI COMPARISON

The chart opposite provides a snapshot of how the AWEX monthly Eastern Market Indicator (EMI) and a range of microns have performed for the past three months (November 2022 – January 2023) in Australian dollar terms compared with the previous five years November 2017 to October 2022 (circles) and the decade previous to that, November 2007 – October 2017 (squares).

At the end of the last full selling week in January 2023, the EMI was about 56% higher than it was compared to the low point in September 2020 during the depths of the COVID pandemic.

During the past three months, the monthly EMI averaged at \$12.87 which is a 20c decline from the average monthly EMI for the previous three months, and is tracking at the 21st percentile against the previous five-year monthly EMI. This means that in the previous five years the monthly EMI has recorded a lower price than the current \$12.87 (November 2022 – January 2023) for 21% of the time.

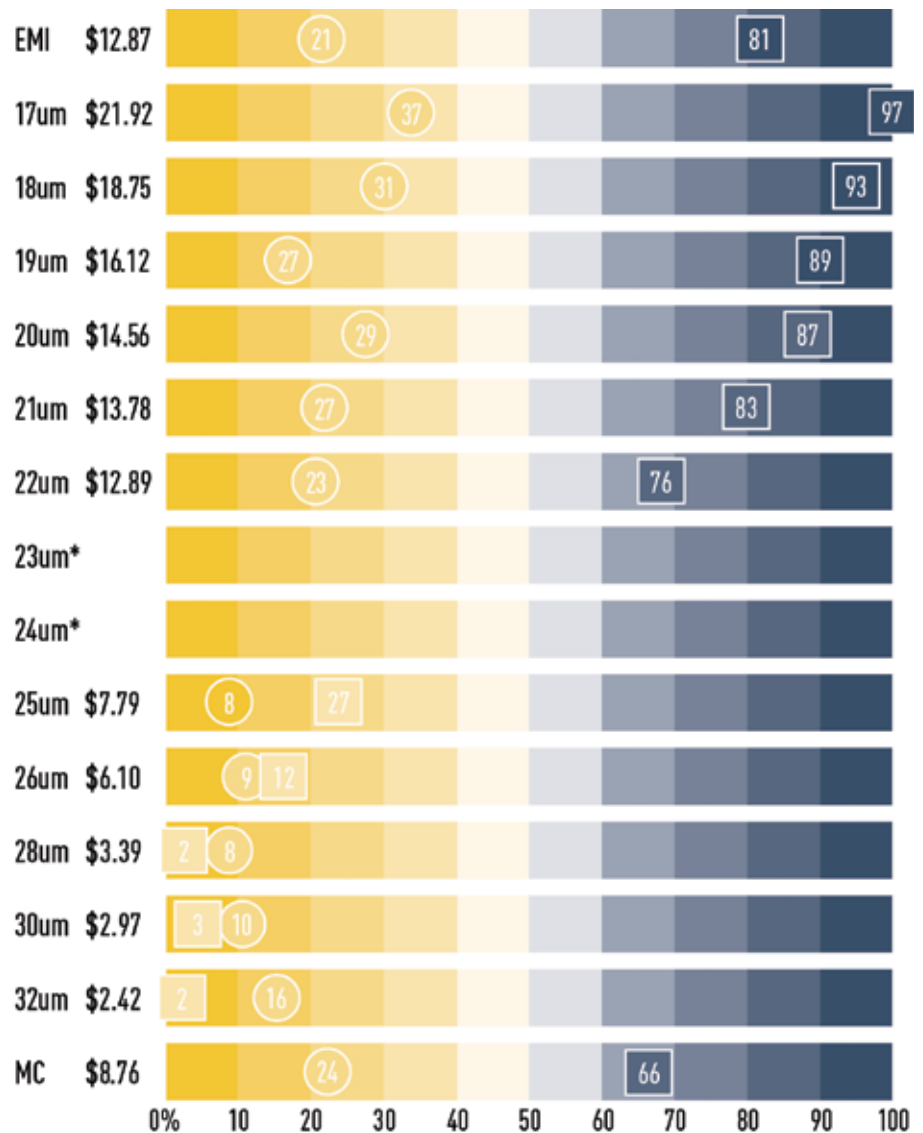
While the EMI is tracking at the 21st percentile over the previous five years, it is tracking at the 81st percentile when compared to the decade November 2007 – October 2017. This means the current EMI of \$12.87 (November 2022 – January 2023) is higher now than it was for 81% of that decade.

18 micron averaged at a monthly value of \$8.75 (31st percentile for the previous five years and 93rd percentile for the decade before that), 21 micron averaged at \$13.78 (27th percentile for the previous five years but 83rd percentile for the decade before that), and 28 micron averaged at \$3.39 (8th percentile for the previous five years and 2nd percentile for the decade before that).

For the past three months, Merino Cardings averaged at \$8.76, operating at the 24th percentile for the previous five years and at the 66th percentile for the decade before that.

AVERAGE MONTHLY EMI FOR NOVEMBER 2022 – JANUARY 2023 COMPARED WITH

- PREVIOUS 5 YEARS NOVEMBER 2017 – OCTOBER 2022
- THE DECADE NOVEMBER 2007 – OCTOBER 2017



* insufficient data

Market intelligence at wool.com

An important part of AWI's Wool.com website is market intelligence information for woolgrowers.

As well as the Weekly Price Reports and Monthly Market Intelligence Reports, there is a graphical display of:

- Eastern Market Indicator – you can select to display AUD, USD, CNY or EUR.
- Offering – displays bales offered and bales sold.

- Currency movements – you can select to display AUD/USD, AUD/CNY or AUD/EUR.
- Forecast of bales sold – displays previous season, current season, current week and forecast.

For the first three categories above, you can select to display data from 3 months to 3 years ago.

AWI also continues to send wool prices and market intelligence direct to about 6,700 woolgrowers' mobile phones. If you would like to subscribe to the free SMS service, visit www.wool.com/subscribe where you will be asked to input your name and the mobile phone number to receive the SMS. You can unsubscribe from the service at any time.

More information: www.wool.com/marketintel

FORMALWEAR REVIVAL BORN IN THE USA

AWI Global Strategic Advisor Peter Ackroyd reports how the US is leading the global return of formalwear, knitwear and preppy casual. Mr Ackroyd is a former President of the International Wool Textile Organisation and is Chief Operating Officer of the Campaign for Wool.



AWI Global Strategic Advisor, *Peter Ackroyd.*

The world of fashion has a way with words, the meanings of which are often confined to a rather privileged few who believe they are 'in the know'.

Recently, a novel, but perhaps a little too slick for some sound bite emerged from the men's wear shows in Milan, London and New York that will be warmly welcomed by all in the wool industry, from farm gate to catwalk. 'Smartorial', according to New York men's wear merchandisers, summed up the dominant theme of Men's Fashion Week in Milan, as suits and jackets with wildly flared trousers in flowing worsted Merino dominated the crowded designer shows for the northern hemisphere autumn/winter 2023/24 season. The look was complemented by a strong return of overcoats as part of an overall 'layering up' message in the light of the energy crisis and soaring heating costs.

UK and Italian spinners and weavers have consistently relied on the quality US market ever since the last non-military woollen manufacturing plant in North America put up the shutters some twenty years ago. Turkish, Chinese and Indian spinners and weavers have also coveted the lower tiers of the men's wear business described by the New York garment industry as 'downtown' ie Macy's, as opposed to 'uptown' ie Ralph Lauren.

The Paul Stuart flagship men's store has been on New York's Madison Avenue at 45th Street since the brand was launched in 1938. There are stores in Washington DC, Chicago and Southampton Long Island. Once dubbed as the 'poor man's Brooks Brothers', Paul Stuart is now very much the go to label for men's apparel, both formal and sport's wear of the tweedy type. Weavers in the UK see the brand as a barometer of trends emerging from a pandemic that took a serious toll on sales of formal clothing in the USA, and indeed elsewhere. Fully expecting online sales to continue to surge post COVID, Paul Stuart has seen a rapid return to in-store sales. "The stores are doing well and whilst e-commerce continues to be good, customers are returning to brick and mortar," noted CEO Trevor Shimpfky.

Paul Stuart has an incredible reputation for tailored clothing and how many times have we heard that tailored clothing is dead? Post 9/11, in 2008 and when everyone in Silicon Valley was wearing T-shirts. But how many times has that not been the case? Sir Paul Smith offered a similar view on his first post-pandemic visit to the USA last year. Tailored clothing continues to account for around 60% of overall sales at Paul Stuart and suits retail from around US\$2,400, a little less than some competitor brands such as Ralph Lauren Purple Label which, fortuitously, is currently confirming further orders of fabric specified in the autumn of last year.

Paul Stuart has been owned by Mitsui Corporation, the brand's long-time Japanese licensee since 2012. The newly opened company flagship store in Tokyo's Aoyama district is seeing a similar return to store, post pandemic. There are some 80 shops in shop and more than 500 corners across Japan, where tailoring and the time honoured made to measure, made to order and pattern order business is now well above pre-COVID levels.

January and February are interesting, some would say pivotal, months for the wool textile manufacturing industry who met at Pitti Immagine Filati in Florence, Milano Unica in Italy and Premiere Vision in Paris as decisions about further orders of yarn and fabric for the next autumn are made. These are decided according to predictions based on a number of factors that include the current winter performance, which is promising, despite

serious misgivings about a possible 'dead cat bounce' following the seasonal surge in men's formals of last year stimulated by a return en masse of celebration events. It has not been the damp squib some suggested.

Richard Boidé, Managing Director of Dormeuil, the worsted fabric merchant and manufacturer based in Paris and Yorkshire recently visited New York. "Market conditions in the USA are most encouraging, particularly in the resurgent made to measure (MTM) market that an ever-increasing number of men's wear brands are developing," noted Boidé on his return to Paris.

Equally encouraging has been the revival of the preppy look epitomised by Ralph Lauren's take on the Ivy League university dress code of the 1970s and 1980s that saw the revival of almost 1930s chinos, blazers, tweed jackets and chunky knitwear.

Mark Hogarth, Creative Director of Harris Tweed said, "Harris features in so many different applications in the USA, ranging from a tweed blazer collection from Thom Browne, a new gilet and blouson concept and an ample three-quarter walking coat at the revitalised Brooks Brothers, a trainer line in Harris by Ralph Lauren and a range of baseball caps by J Press".

Echoing the sentiments of Mark Hogarth, Sean Crannigan of Knoll Yarns in Ilkley in West Yorkshire noted, "The tonnage of woollen yarns to the returnees from Chapter 11, Brooks Brothers and J Crew, are exceeding 2019 levels and new business with outdoor brands such as Filson of Seattle is most encouraging, as premium price point goods embrace natural fibres. Ralph Lauren is going from strength to strength".

SUSTAINABILITY SPOTLIGHT: BIODIVERSITY

In this Sustainability Spotlight, we look at biodiversity: a subject which has recently come to the fore of the global sustainability agenda. It is a topic that brands are increasingly looking at when considering sourcing raw materials for their products.

The focus of brands on their supply chains and the impacts of raw material production is stronger than ever. Conversations between AWI and brand partners about sustainability now cover many aspects of the topic.

While the world's environmental focus to date has largely been on carbon emissions' reduction, with swathes of countries and businesses setting carbon neutrality targets, December 2022 saw the UN Biodiversity Conference (COP 15) place **biodiversity** firmly on the global agenda.

Hailed as the 'Paris Climate Accords equivalent for nature', the Kunming-Montréal Agreement established a new Global Biodiversity Framework, with 23 targets and a clear directive that biodiversity loss must be tackled jointly to the climate crisis.

Biodiversity and the fashion industry

As well as *regulatory* pressures on brands, *consumers* are also increasingly looking for brands to have biodiversity measures in place. Faced with these two pressures, and often with their own desire to do better, brands are implementing sourcing strategies that take biodiversity into account.

According to the global non-profit Textile Exchange, 38% of fashion/textile companies are already implementing restorative or regenerative measures to remediate biodiversity loss. A preference for sourcing fibres from farms practicing regenerative land management is a key approach that brands are pursuing to deliver on their commitments.

One of the most prominent voluntary industry agreements that has brought biodiversity into the vernacular of brands is The Fashion Pact. With more than 200 brand signatories, representing a third of the global fashion industry by volume, The Fashion Pact has set goals across three priority areas: Climate, Biodiversity and Water. In December, it launched a Biodiversity Strategy Tool Navigator to guide fashion companies through the stages of developing a biodiversity strategy.

Some companies are setting themselves goals to regenerate wildlife habitats and invest in regenerative farming. LVMH, the world's largest luxury fashion conglomerate which owns brands including Louis Vuitton, Loro

Piana and Christian Dior, has set itself the goal of "regenerating 5 million hectares of wildlife habitat by 2030 and has begun to deploy regenerative agriculture programs for strategic agricultural raw materials such as grapes, cotton, wool or leather."

In the case of wool, brands are asking, "What are woolgrowers doing to protect nature?"

Brands supporting woolgrowers' biodiversity

Some brands are willing to pay a premium for wool certified from a regenerative land management system (for example via NATIVA or ZQRX), while others are establishing grants available directly for woolgrowers to access to help them undertake more sustainable production practices.

In January 2021, Kering Group, which owns brands including Gucci and Saint Laurent, launched its Regenerative Fund for Nature, demonstrating the group's efforts to preserve biodiversity. According to Kering, "the Fund seeks to show how nature, climate change and livelihoods can change for the better, thanks to transforming agricultural practices... the Fund ultimately aims to provide concrete outcomes in terms of biodiversity and climate change, while at the same time supporting animal welfare and rural livelihoods by deploying the latest scientific tools and methods".

In a first for the Australian fashion industry, Country Road launched a climate fund to provide \$1.5 million in grants to "drive climate solutions in the fashion industry". One of their four pillars for funding grass roots projects is to protect and restore biodiversity.

In the years to come, there might be opportunities for farmers to access 'nature markets', the biodiversity equivalent of carbon credits.

Increasing biodiversity on your farm

According to the Australian Department of Climate Change, Energy, the Environment and Water: "Australia is one of 17 countries in the world described as 'mega diverse'. This group of countries cover less than 10 per cent of the world's area but support more than 70 per cent of biodiversity."

How can Australian woolgrowers better prepare and/or showcase their biodiversity management?

First and foremost, if a woolgrower doesn't have one already, implementing a Biodiversity Management Plan that outlines specific actions and strategies to conserve and protect the biodiversity of their land is a good starting point.

Transparency and traceability are going to be key for proving biodiversity credentials – and industry initiatives are under way to help woolgrowers (see page 3).

AWI has been working, often collaboratively with industry groups, on projects to set up the industry for success into the future. For example:

Natural Capital Accounting – an AWI-funded project that used Natural Capital Accounting to objectively measure the environmental credentials, including biodiversity protection, of 11 Australian wool-growing properties. See www.wool.com/nca

Sheep Sustainability Framework – An initiative by the Australian sheep and wool industry to demonstrate the industry's sustainable practices, which includes a priority of encouraging biodiversity. See www.sheepsustainabilityframework.com.au

Farming for the Future – a national research program that aims to provide the evidence and practical support for farmers to incorporate natural capital as part of a profitable farming business, with specific insights on biodiversity. See www.farmingforthefuture.org.au

Carbon Storage Partnership – an MLA-led, multi-party initiative that aims to identify the most effective techniques for farmers to reduce greenhouse gas emissions, sequester carbon in soil and vegetation, and build biodiversity. See www.mla.com.au/carbon-storage

Land, Water & Wool – A five-year program that was the Australian wool industry's most significant R&D investment in natural resource management, which tackled topics including biodiversity. See www.wool.com/biodiversity

USE THE NWD SO YOUR WOOL ATTRACTS 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.

The National Wool Declaration (NWD) enables woolgrowers to communicate directly with prospective buyers, processors and retailers, and them send key 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.

From a financial perspective, woolgrowers usually receive premiums for wool declared as Non Mulesed (NM) or Mulesed with Analgesic/ Anaesthetic (AA). **This is a greater issue for WA woolgrowers as their declaration rate remains at about 50%, some 30% lower than all other states that range from 76% to 87% wool declared, with Queensland and Tasmania having the highest declaration rate.**

Wool sold as Not Declared (ND) usually receives a Discount compared to wool that is declared as Mulesed (M). See the table to the right. 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 Mulesed (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/

For further advice on achieving Premiums for your wool, contact your wool broker.

Premiums and Discounts for Mulesing Status (c/kg clean) (comparison with declared as Mulesed)

* The 2022/23 season in all tables is the year-to-date 31 January 2023.

		Merino						Non-Merino				
		16	17	18	19	20	21	22	27	28	29	30
		Non Mulesed (NM)										
Season	2019/20	55	43	43	37	34	28	34		5	12	
	2020/21	33	27	32	26	19	19			0	6	2
	2021/22	60	79	65	45	47			7	9	4	
	2022/23*		52	40	25	6	6		5	-8	8	
		Ceased Mulesing (CM)										
Season	2019/20	37	29	37	-1	4	12			3	4	
	2020/21		1	3	8	8	3			1		
	2021/22		57	34	27							
	2022/23*			27	28							
		Mulesed with Anaesthetic &/or Analgesic (AA)										
Season	2019/20	18	15	12	0	1	-1	6	18	0	-3	
	2020/21	19	12	10	11	11	5	3		4	7	2
	2021/22		28	24	18	14	0	11	14	6	3	
	2022/23*		28	9	12	4	2			9		
		Non Declared (ND)										
Season	2019/20	-12	-3	-1	-6	-4	-3	-10	-12	-11	-6	
	2020/21		-4	2	-5	-6	-1	-2		-8	-4	
	2021/22		2	-5	-1	-5	-4		-9	-6	-4	-1
	2022/23*			-18	-2	-3	1		-8	-8	-8	

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.

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 drastically 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.**

READERS PHOTO'S!

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* (see right).



Unloading with lightning speed

Alishia Garlick of Beulah in the Mallee of Victoria took this photo while unloading the sheep with an incredible lightning show in the distance. Thanks for tagging this photo #beyondthebale on Instagram, Alisha (@a5_on_the_farm).



William wearing wool in wool

Eighth-generation cattle and sheep farmer William Dewar from Guilderton, Western Australia. He was six months old when this photo was taken in the shearing shed, helping his dad Joe! His mum Jessica says William is wearing a (Woolmark) Merino top.



Defiance!!

Titled 'Defiance!!' by @photos_by_snoddy on Instagram, this photo was shot by Andrew Snodgrass at Wallaroo, South Australia.



Pop's little rousies

The grandchildren of *Daryl and Lesley Honeysett, cousins Jack and Beth, helping out with the shearing in at 'Oakville' at Gulgong in NSW, wearing their POP'S LITTLE ROUSIE singlets.*

MANAGE YOUR LIVESTOCK SMARTER!



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