

Beyond the bale

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FEEL MERINO MARKETING CAMPAIGN



Beyond thebale

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FRONT COVER

Woolgrower Dave Ward from 'Spring Ponds' near Goulburn, NSW, features in AWI's new 'Feel Merino' marketing campaign - see page 6.

 This magazine is printed on PEFC (Programme for the Endorsement of Forest Certification) paper stock.



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SHED SAFETY**









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AWI INVESTMENT STRATEGIES

-  Marketing
-  Sheep Production, Science & Technology
-  Consultation
-  Processing Innovation & Education Extension
-  Traceability

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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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GETTING ON WITH BUSINESS



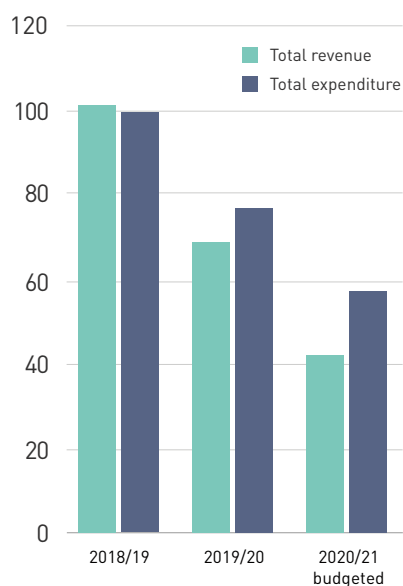
Stuart McCullough
Chief Executive Officer
Australian Wool Innovation

Throughout the global COVID-19 pandemic, AWI has continued to work relentlessly for woolgrowers to ensure the sustainability of our industry and profitability for your enterprises.

AWI CUTS BACK ON SPENDING AS REVENUE DROPS

AWI's Annual Report for 2019/20, which was published in October, shows that AWI reduced its expenditure during the year by 22% compared to the previous year, to \$77 million, and we are having to reduce our expenditure even further during the current financial year. Furthermore, the company used nearly \$8 million of its reserves last year and we will once again dip into reserves in 2020/21.

These cuts in expenditure and reserves are in response to the company's deteriorating revenue which in 2019/20 fell by nearly a third compared to the previous year and is forecast to fall even lower during 2020/21. Our total revenue is to a large extent dependent on income from the wool levy, which has been badly affected during 2019/20 (falling by nearly 45% compared to the previous year) due to the fall in the EMI, the reduction in the rate of wool levy from 2% to 1.5% which came into effect on 1



AWI revenue and expenditure (\$million)

July last year, and the fall in Australia's wool production caused by the drought.

AWI operates in a lean, efficient and transparent manner, but just like any business with a reduced income, we have had to make cutbacks in staffing and projects – and we will have to continue to do so as long as our revenue falls. We have cut staff numbers from 175 a year ago to presently 153 and plan to cut staff numbers further, to 125 by 30 June 2021.

Although we have healthy reserves at the moment, built up during past years for tough times like right now, continued drawing down on our reserves is not sustainable in the long term.

View details of AWI's revenue and expenditure in the 2019/20 Annual Report at www.wool.com/annualreport.

GLOBAL MARKETS WEAK, BUT THERE ARE POSITIVES

The COVID-19 pandemic continues to be a terrible health crisis that impacts the world economy. Unfortunately, many large wool-consuming countries, especially in Europe, have had to go into another lockdown in the past few months in response to a second wave of the virus. This has negatively impacted the consumption of apparel products in many key markets and sectors during wool's important autumn retail season in the northern hemisphere.

Wool's traditional sectors of suiting and formal attire have continued to be especially badly hit as many people are still restricted to working from home and spending much of their leisure time at home too.

AWI must be particularly smart about when, where, and indeed whether it is prudent to actually spend woolgrower funds – and this is especially the case with our marketing activities at the moment. We have made cutbacks in marketing expenditure to the extent that AWI is currently operating with spending split 50:50 between marketing and R&D, rather than the usual 60:40 split.

However, there are still some positives for wool at retail, with several sectors showing promise.

For instance, many knitwear manufacturers are working at levels similar to prior to the pandemic, and the loungewear and activewear sectors are seeing rises in demand.

We consequently recently released funds to launch an activewear marketing campaign in the US promoting Merino wool as a natural fibre that is soft on the skin and ideal for sports and outdoor pursuits. A key element of the campaign is to drive purchases of commercially available Merino wool performance wear on e-commerce giant Amazon.com.

The one crucial market that has bounced right back from the disruption caused by COVID-19 is China, which is very fortunate for Australian woolgrowers because the vast majority of Australia's wool is exported there for processing – in the first quarter of the 2020/21 season, more than 90% of Australia's exported greasy wool went to China. Furthermore, half of that wool is consumed at retail in China. The country has a large population, a growing affluence, and a climate that is ideal for wool.

To make the most of China's economic resilience, we recently released funds there for a major marketing campaign involving 200 brands and China's largest business-to-consumer e-commerce platform, TMALL. We continue to work closely with our industry partners in China to maintain the Australian wool industry's good relationships in the country.

The demand for wool at retail in Japan and South Korea is also looking resilient at the moment and we have been doing some test marketing in those countries.

FOCUS ON DIGITAL BRINGS REWARDS

It is no coincidence that our two recent campaigns in the US and China involved collaborations with Amazon and TMALL, two of the largest and most mature e-commerce platforms in the world. We have also very recently launched a campaign with Zalando, a large e-commerce platform in Europe.

This direction towards marketing via proven and robust digital retail platforms is a response to the increase in purchasing of goods online by consumers, a movement

CONTINUED FROM PREVIOUS PAGE

accelerated by the closure of brick and mortar stores due to COVID-19.

Even before COVID-19, AWI had put a lot of effort into transforming its business into a digital-first company. This has put us on the front foot in many areas, including R&D and extension as well as marketing activities. For instance, our Woolmark Learning Centre has proved popular amongst supply chain professionals and students; we have embraced the shift from face-to-face to digital trade shows; and our WoolQ platform is fully operational and an opportunity for the Australian wool industry to harness the digital revolution

ON-FARM R&D AND EXTENSION PROJECTS

Because almost all our on-farm R&D and extension projects are run in Australia, which has so far escaped the worst of the global COVID-19 pandemic, they are currently continuing largely as normal, although we closely monitor their progress and budgets.

We continue to invest in on-farm R&D in the areas that woolgrowers have told us are important to them: optimising sheep health and welfare, combatting wild dog and fox attacks, increasing the

reproductive efficiency of ewes, improving the genetic gain of the Merino, funding of in-shed shearer and wool handler training, and harnessing opportunities for on-farm automation.

In addition, we deliver practical training programs through our extension networks in each state to increase woolgrowers' adoption of best practice on-farm production and management. We also provide timely market intelligence to woolgrowers, hold many face-to-face industry events, and we run projects to encourage the next generation into the wool industry.

AWI ANNUAL GENERAL MEETING HELD ONLINE

AWI held its 2020 AGM on Friday 20 November, as an online virtual AGM for health and safety reasons. Along with three of AWI's general managers, I gave a detailed presentation on the activities of the company during 2019/20 and how the economic consequences of the COVID-19 pandemic affect AWI's current and future activities. A video recording of the AGM is available to be viewed on the AWI website at www.wool.com/agm.

LOOKING FORWARD TO A BETTER 2021

As 2020 draws to a close, we can reflect on a very difficult year for the wool industry, caused by the economic fallout from the global pandemic. Although still much lower than we would like, the EMI has somewhat recovered during the past few months. We hope that this continues throughout 2021 as markets recover.

The industry has weathered uncertain economic conditions before, and I strongly believe that the premium and natural qualities of our fibre and the relationships we have built along the supply chain during the past decade ensures a positive outlook for Australian wool.

We have been thankful of some good rain in the south-east of the country, but our thoughts are with those areas in which drought conditions persist, including Western Australia and parts of South Australia.

I hope you have all been safe and well during these unprecedented times and remain so during Christmas and throughout next year.

B

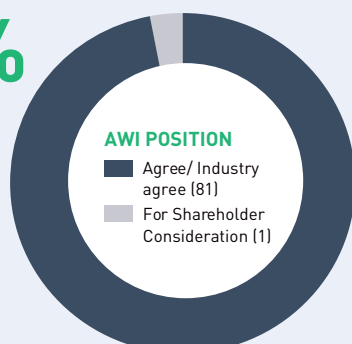
REVIEW OF PERFORMANCE RECOMMENDATIONS AWI'S PROGRESS OF IMPLEMENTATION

As part of AWI's three-year business cycle, an independent review of performance (ROP) of AWI is routinely undertaken to assess the company's performance. The latest ROP was undertaken by Ernst & Young (EY) for the period 2015-2018. EY's report, which was published in July 2018, included 82 recommendations.

In September 2018, AWI launched its ROP Implementation Portal at rop.wool.com to provide detailed and up to date information to woolgrowers about the progress made by AWI in implementing the 82 recommendations. Displayed right is a summary of the overall progress, and the progress across each of the seven themes of the recommendations.

Further information is available at rop.wool.com

99.45%
OVERALL
IMPLEMENTATION
PROGRESS



THEME IMPLEMENTATION PROGRESS



* Percentage figure is calculated on the cumulative completion rate within each theme. Remaining recommendations at various completion stages. To view individual recommendation progress rates, visit rop.wool.com

CHINA E-COMMERCE CAMPAIGN HAS PERFECT TIMING



THE THREE MERINO SISTERS

As part of the educational aspect of the campaign, The Woolmark Company launched a humorous short film that featured three stylish 'Merino sisters' (see image left) being interviewed by a very discerning fashion commentator.

The three Merino sisters showcased the fibre's next-to-skin softness, its breathability and suitability for sports, and its machine washability – with the interviewer concluding: "I never give compliments, but the Merinos... are special".

The Merino sisters also appeared in TMALL's live-streaming sales rooms for surprise visits and endorsements.

CRUCIAL IMPORTANCE OF CHINA MARKET

AWI CEO Stuart McCullough said AWI is proud to partner on behalf of Australian woolgrowers with China's largest e-commerce platform, TMALL, helping to highlight Australian Merino wool's position as the premier ingredient in luxury apparel to China's discerning, savvy shoppers.

"The marketing strategy is built around a content-commerce model which allows us to focus on driving purchasing intent at a time when this season's sell-through has never been more critically important for the future of the wool industry," he said.

"At AWI, we predicted China's economy would be the first to bounce back from the disruption caused by COVID-19. The country is Australian wool's biggest and most important customer. The time is right to promote our wool to a market that is both willing and able to buy wool in large amounts."

AWI recently partnered with the largest e-commerce platform in China, TMALL, to promote Australian Merino wool. Pictured are three stylish 'Merino sisters' that appeared in a humorous short film that accompanied the campaign.

Capitalising on the immense strength of online retailing in China, AWI's marketing arm The Woolmark Company has collaborated with China's most influential business-to-consumer e-commerce platform, TMALL, to launch a perfectly timed promotion of Australian Merino wool.

E-CAMPAIGN PROVES POPULAR

- 500 million impressions
- 11 million video views
- 60% of campaign viewers now more likely to buy wool

China represents the world's most lucrative fashion market and retail e-commerce in the country is enormous, estimated to amount to 1.9 trillion US dollars in 2019.

TMALL, which is part of Alibaba Group, is by far the most visited business-to-consumer online retail website in China and accounted for more than half of all retail e-commerce sales in China in 2019.

The Woolmark Company's partnership with TMALL aims to put Merino wool at the front of digitally savvy shoppers' minds, whilst further championing the wool products of

premium Chinese and international brands.

While the strategic partnership is a response to the growing demand for high-quality products in the Chinese market, the marketing campaign was especially well timed due to many other retail markets across the world still being significantly unsettled due to COVID-19.

Running from 22 September through to 11 November, the campaign showcased the premium natural qualities of Merino wool and aimed to make Merino wool the most coveted fibre for womenswear during winter 2020.

The success of the campaign will be measured through analysis of media and social engagement (currently available figures show that the campaign has generated more than 500 million impressions and 11 million video views) and, most importantly, by the increase in Merino wool sales.

The Woolmark Company's collaboration with TMALL builds on a similar joint campaign last year. This year, however, the campaign was held for much longer, with the number of brands involved doubling to approximately 200.

NEW MARKETING CAMPAIGN FEEL MERINO

AWI has launched a new marketing campaign aimed at increasing US consumers' awareness of Merino wool as a natural fibre that is soft on the skin and ideal for sports and outdoor pursuits. A key element of the Feel Merino campaign is to drive purchases of commercially available Merino wool performance wear on e-commerce giant Amazon.com.

CAMPAIGN MESSAGE

"Soft on your skin no matter the challenge, Mother Nature knows best with Merino wool."

CAMPAIGN OBJECTIVES

1. **Education** – To increase awareness for Merino wool as a natural and innovative performance fibre that is soft against the skin.
2. **Action** – To build consumer purchasing of commercial partners' Merino wool performance wear products via Amazon.com.

Sportswear is the fastest growing apparel sector and there is currently a retail boom in outdoor sectors such as hiking and biking. Merino wool's inherent qualities, such as thermo-regulation, breathability, odour resistance – and superior softness next-to-skin – make the fibre the perfect choice for sports, outdoor and athleisure apparel.

However, while great progress has been made by the wool industry during the past few years in product development and marketing the benefits of wool, there is still a persistent and outdated misconception amongst the average consumer, especially in the US, that wool is "warm and itchy" and only suitable for very traditional (ie non-sport) sectors.



Woolgrower Dave Ward, 'Spring Ponds' near Goulburn, features in the Feel Merino campaign.

Dave, with his wife Skye and three children who are sixth generation at 'Spring Ponds', run a 17-micron self-replacing Merino flock on the property. "Being involved in filming for the campaign to promote Australian Merino wool to the US market was a great experience," Dave said. "It's an exciting campaign which should have good cut-through to the US consumer – an increasingly important market for our fibre. I wore Merino wool base-layers when I walked the Kokoda Track a few years ago and even in all that humidity it kept me cool and never smelt even after days of wear."

"Whether you are facing another long day looking after your flock or pushing yourself through a gruelling exercise routine, Merino wool is the ultimate fibre to support you, so you exceed your personal best."

AWI's new Feel Merino marketing campaign has been developed to help put an end to this mistaken perception and create a new narrative for Merino wool as a hard-working, but always soft, performance fibre – the campaign's message being: "Soft on your skin no matter the challenge, Mother Nature knows best with Merino wool."

The campaign, which targets millennials, was launched in early November by AWI's marketing arm, The Woolmark Company, and runs through to the end of the year. Although the campaign is currently targeting the US market, it has the ability to rolled out across other geographic markets.

The campaign includes the **Feel Merino Anthem**, a 60-second film, plus shorter edits, which are being shown across The Woolmark Company's digital and social channels, plus on e-commerce giant Amazon.com (see page 8).

The campaign also includes **Feel Merino Single Stories** which connect the physical nature of working growing Merino wool to a specific athletic performance: running, biking,

FEEL MERINO

"SOFT ON YOUR SKIN NO
MATTER THE CHALLENGE,
MOTHER NATURE KNOWS BEST
WITH MERINO WOOL"

"Merino wool is the real deal, the antithesis to a synthetic world, the original performance fibre."

hiking and climbing. These stories are being used across the digital and social channels of The Woolmark Company as well as those of brand partners whose Merino wool products feature in the campaign.

The partners featured in the campaign include Tracksmith, Rapha, PEARL iZUMi, Vivobarefoot, Salomon, Minus33, Woolly, Ibex, Ridge Merino and Rhone. Importantly, path-to-purchase links are provided to partners' webstores and the Feel Merino Amazon.com store.

"The Feel Merino campaign currently being targeted at the lucrative US market is challenging outdated perceptions of wool and creating an excitement about the future, rather than nostalgia for the past. It celebrates the innovative and natural performance qualities and super softness of Merino wool – and is finding a home for Merino wool with a new audience," AWI CEO Stuart McCullough said.

"Partnering with the largest retailer on the planet, Amazon, provides the campaign with the perfect media platform for our nation's premium fibre whilst also driving consumers towards Merino wool performance wear products that they can readily purchase."

Further components of the campaign, featuring an Australian-born sportsman famous in the US (to be announced), will be rolled out later this month.

MORE INFORMATION

www.woolmark.com/feel-merino



The **Feel Merino Anthem**, a 60-second film, aims to capture people's attention and provide them with a new understanding about Merino wool's natural versatility and suitability for performance wear.



Shot in NSW, the campaign's story of Merino is told through the people who wear it: the iconic Australian woolgrower and the everyday athlete. The two are presented in parallel, showing that woolgrowers have days as physical and exacting as athletes – and delivering the message that Merino wool helps you perform strongly by always staying soft. The woolgrower, Dave Ward from 'Spring Ponds' near Goulburn, is wearing a wool flannel from **Ridge Merino**; the hiker wears a **Rhone** Merino jersey.

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FEEL MERINO



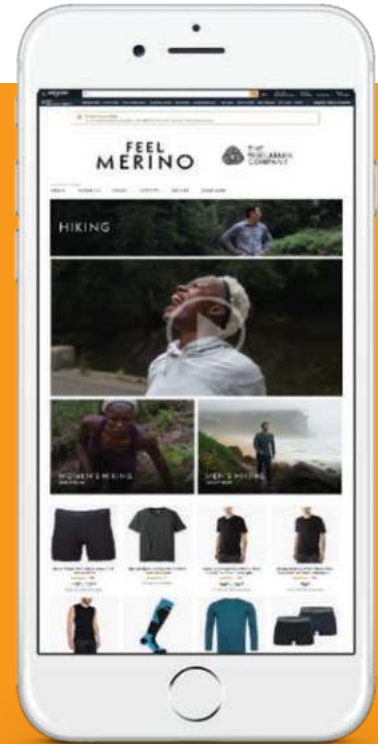
WOOLMARK FEEL MERINO PARTNERSHIP WITH AMAZON

The Woolmark Company has partnered with e-commerce giant Amazon for the Feel Merino campaign.

The partnership involves a highly targeted promotion of the campaign across the Amazon e-commerce site, the Amazon family (eg Fire TV) and off-Amazon (eg Amazon users across the web).

All activity is directed towards bringing consumers to the Feel Merino store within Amazon.com where they are directed to Merino wool products which they can buy from brand partners, which include Woolly, Ibex, Vivobarefoot, Minus 33, Pearl iZUMi, Western Rise, Ridge Merino, Wool&Prince and Ortovox.

Head to www.woolmark.com/feel-merino to access the store on Amazon.com.



The Woolmark Company's Feel Merino store on Amazon.com makes it very easy to find commercially available Merino wool products for your preferred sporting activity.

A SELECTION OF THE BRANDS WHOSE GARMENTS ARE AVAILABLE ON THE FEEL MERINO STORE ON AMAZON.COM



Pearl iZUMi



Ridge Merino



Ibex



MOVE IN MERINO CHALLENGE ON STRAVA

In conjunction with its Feel Merino campaign, The Woolmark Company in November ran a community engagement initiative in conjunction with Strava, the exercise-focused social networking platform. The 'Move in Merino Challenge' on Strava encouraged consumers to exercise and commute wearing Merino wool, driving sales of brand partners' products and creating a community of active-minded Merino wool ambassadors.

The Woolmark Company in November launched on Strava its Move in Merino Challenge – encouraging people in the Strava community to replace the time that they would usually spend commuting, with getting outdoors and active: running, walking or cycling... in Merino wool.

Especially popular with runners and cyclists, Strava has 58 million registered users worldwide. The website enables users to upload their fitness activity using GPS data. They can compare their performance over time, compete with their community, and share the photos, stories and highlights of their activities.

The Move in Merino Challenge ran from 2-29 November, with more than 210,000 people joining the initiative during the first 2 weeks after launch.

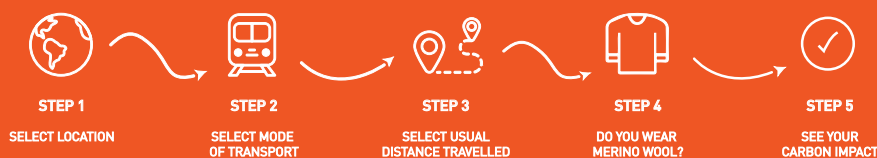
Participants were challenged to undertake 20 hours of activity during the month, which once completed enabled them to unlock access to exclusive discount codes from some of The Woolmark Company's brand partners including ashmei, Vivobarefoot, Tracksmith and Iffley Road, thereby encouraging consumers to purchase and exercise in Merino wool products.

"Our Move in Merino Challenge on Strava taps into the mind-set of active-minded professionals who are either working from home or avoiding public-transport, encouraging them to repurpose their usual rush-hour commute with exercise in Merino wool. By connecting directly with individual users, the initiative aims to increase awareness of the benefits of our country's premium natural fibre and drive sales for our brand partners," said AWI CEO Stuart McCullough.

"Cutting back on the carbon footprint of motor-powered commuting has been on the radar for some time now and people's resistance to use crowded public transport in the wake of COVID-19 has compounded this shift. This move to a more active lifestyle and commute provides a market opportunity for Merino wool – and our Move in Merino Challenge is an inventive example of how we are working in this growing area."

The Woolmark Company has also launched The Woolmark Company Club on Strava, providing a platform for active-minded consumers to come together to find out the latest Merino performance offerings, stay connected and share inspiration to get moving in Merino wool. A Strava Club works much like a brand Facebook page. **B**

CARBON CALCULATOR



To support its Feel Merino campaign and the Move in Merino Challenge on STRAVA, The Woolmark Company launched a Carbon Calculator on Woolmark.com.

It enables people to quickly, and very simply, work out how much greenhouse gas emissions they would save if they ditched their normal, polluting, commute by bus, train or car and instead walked or jogged.

The Carbon Calculator also educates users about the benefits of commuting and exercising in Merino wool. Importantly, it then points users to Merino wool products they can buy on the Feel Merino Amazon store. **B**

MORE INFORMATION
www.woolmark.com/calculator

MORE INFORMATION
www.strava.com/challenges/Move-in-Merino

MERINO WOOL REVOLUTIONISES THE RU

Leading US-based running brand Tracksmith launched in September its first Run Commute Collection, featuring Australian Merino wool as the ultimate fibre for allowing runners to commute and then remain in their gear, or re-wear pieces for their return commute.

Long before running races or even the concept of exercise, running existed to get us from A to B faster than walking. Now we're here in the 21st century, where it's not uncommon to drive to the gym to run on a treadmill, we sometimes forget that running is first and foremost a mode of transport.

"However, in the current COVID-19 climate, an increasing number of people are now looking to avoid public transport and are seeking alternative, healthy ways for getting to where they need to be," said Tracksmith founder and CEO Matt Taylor.

"As a result, 'run commuting' is growing in popularity, as it is time-efficient, healthy and inexpensive. But run commuting takes considered gear. That's why we've introduced our first-ever Run Commute Collection, featuring tailored staples for active transport made from Australian Merino wool and developed with support from The Woolmark Company.

"Merino is the ideal material for a run commute: breathable and moisture wicking, with a sophisticated feel that won't look out of place if you stop for coffee. It dries in a flash and won't retain odours for the run home."

THE RUN COMMUTE COLLECTION

For its Run Commute Collection, Tracksmith set out to make running pieces with cosmopolitan cachet: something that wouldn't look out of place in the office or on errands, but that could still perform when a runner needs it most.

The collection features the **Run Commute Jacket**, made from a custom-developed Merino blend stretch woven fabric, designed for maximum versatility with sophisticated tailored details, reflective trim and water resistance. The jacket features two zippered hand pockets and an invisible zip pocket that can securely store a phone, credit card or keys while running. The **Run Commute Pants** have lean lines and classic styling paired with performance, for a refined look and the feel of track pants that make for an easy transition from run to work. They feature two hand pockets and a back zip pocket, perfectly sized to hold a phone.

The **Run Commute Shorts** is a first-of-its-

kind Merino blend stretch woven short with a lightweight Merino blend jersey liner, is water resistant, and includes two zippered pockets that can hold a phone or credit card, and a small key pocket. The pockets are intentionally set to the back of the hip so the contents won't interfere with the runner's stride. The shorts are designed to not only handle serious mileage and dry quickly, but also have a relaxed, sophisticated look that wouldn't be out of place if you dashed into a shop.

The collection also features:

- **Harrier Tee, Tank and Long Sleeve**, Tracksmith's best-selling all year-round training top, made from an 89% superfine Australian Merino wool blend.
- **Brighton Base Layer Tank**, a seamless Merino wool blend base-layer using an engineered Merino wool mesh.
- **Merino Brief and Boxer Brief**, the first underwear products from Tracksmith featuring high-stretch and incredibly soft Merino wool with enough structure to prevent bagging.
- **Daily Crew Socks**, made from soft and lightweight silk yarns combined with the quick-drying, anti-odour properties of Merino wool.

Tracksmith's Merino wool product range is its largest to date, with a sustained increase since 2018. The brand's Run Commute Merino collection is available to customers globally. It also features in AWI's Feel Merino campaign (see page 6).

"Following the success of our previous collaboration with Tracksmith, which resulted in a large increase in the brand's sales of Merino product, this new collection once again showcases the performance benefits of Merino wool – and is particularly timely and in step with the current mood of consumers," AWI CEO Stuart McCullough said.

"Merino's natural moisture management and odour resistance are key. The collection perfectly meets consumers' demand for versatile performance apparel, allowing them to travel on foot to the office, around the city and home again, in comfort." **B**

MORE INFORMATION

www.woolmark.com/tracksmith
www.tracksmith.com/collections/run-commute
<https://run-commute.tracksmith.com>



Commuting on foot is a time-efficient, healthy, inexpensive and eco-friendly way to get to where you need to be – and it is becoming increasingly popular, particularly due to the COVID-19 pandemic. In response and with support from AWI, US-based brand Tracksmith has produced a Run Commute Collection made from Australian Merino wool.

N COMMUTE

ROAD TESTING THE RUN COMMUTE MERINO COLLECTION

Tracksmith put the collection through its paces by testing the product in London and New York with three commuters.



LEON CERRONE, LONDON

Leon often starts his day with a 45-minute commute on foot from Holloway through Camden and Regent's Park to his job managing the Richard James flagship store on Savile Row, London's home of tailoring, where he finds he is a better manager when he's had his morning run.

"The training process [for a half marathon] made me fall in love with running and I've never looked back – running is a big part of my life now, and running to work is just what I do."

Leon Cerrone wears the Tracksmith Run Commute Jacket and Pants.



NICHOLE LOHER, NEW YORK

Nicole is an avid runner and triathlete, digital strategist and NYU adjunct professor. She uses running as a way to fit in mileage into a busy schedule that often has her moving around the city during the day.

"My favourite part of running in the city is how quickly you can see the sights, the possibility of running into friends, and the fact that I can run anywhere between Manhattan and Brooklyn faster than the subway would take."

Nicole wears the Tracksmith Merino Briefs under the Run Commute Pants, with the Brighton Base Layer Tank.



MEGGIE SULLIVAN, NEW YORK

For Meggie, a freelance content strategist, run commuting is often the best way to get from her home in Harlem or from work in Brooklyn to her end of day track practice with Central Park Track Club.

"By the time I arrive at work, my mind is clear and I have a little runner's high. I've achieved something just for me already and I feel I can tackle whatever lies ahead. After work, I am either heading out to practice and to be on time I'll jog over to the train, or I'll run home."

Meggie wears the Tracksmith Harrier Tank and Run Commute Shorts.

MERINO WOOL

CHOSEN FOR NEW BAREFOOT RANGE

With support from The Woolmark Company, leading global barefoot footwear company Vivobarefoot has developed a new natural footwear range that incorporates Merino wool. The premium wool fibre was chosen due to its superior performance and sustainability benefits.



The **Primus Knit Wool** models incorporate Merino wool next to the skin of the foot, which provides year-round natural comfort. Pictured is the Primus Knit Wool Junior, suitable for active and everyday use.

The human foot is a biomechanical masterpiece, with an immense degree of natural strength and movement. Throughout history, when left to its own devices, bare feet have *thrived* doing everything from walking and running to jumping and dancing.

There are now a growing number of footwear brands that are producing minimalist, thin-soled footwear that enable the wearer to be as close to barefoot as possible, returning the foot to a near-natural state.

Based in London, England, Vivobarefoot is a leading company in the global market for barefoot shoes, producing fashion-forward designs coupled with a minimalist sole that protects the foot while providing feet with maximum sensory feedback. The brand has a complete footwear collection for outdoor, active and everyday wear, along with a line for kids.

As well as being dedicated to supporting human health through their footwear's performance, Vivobarefoot is strongly committed to regenerating the planet by choosing only natural, recycled and bio materials for all its new products.

In September, Vivobarefoot launched a new 'natural' range of footwear that incorporates

Merino wool as its key fibre, providing sustainability credentials as well as incredible natural performance. The company states the super-natural footwear allows the feet to move, breathe and perform in a way that synthetic or petroleum-based shoes cannot.

Merino wool is used in the new natural tech knit upper of the brand's popular Primus Knit and Magna Trail styles – for men, women and children. Merino wool is combined with Tencel™ into a knitted sock, and also finished with a wild hide leather upper and 45% natural rubber outsole.

Due to the barefoot design principles behind the brand's footwear, Merino wool was specifically purposed for the layer against the foot, providing enhanced softness and breathability combined with the fibre's sweat wicking, temperature regulating and odour neutralising abilities.

Vivobarefoot Co-Founder and CDO, Asher Clark, says the company is always striving for better ways of doing things and looks to nature for materials with high levels of performance to make the perfect shoes, perfect for feet.

"The more we learned about the incredible characteristics of wool, we quickly realised

we needed to work with the global authority on wool, The Woolmark Company," Mr Clark said. "The combination of the Merino wool, which is an engineered knit against the skin for amazing thermal regulation was teamed up with Tencel, made from eucalyptus tree pulp fibre as the top layer that helps enhance the durability and overall life span of our footwear while keeping things natural."

Vivobarefoot approached AWI's subsidiary The Woolmark Company to support the development of its new 'natural' material products, with Merino wool being the key fibre to help build out this new category. This is the first time that Vivobarefoot has used wool in its footwear line. The resulting footwear range is certified with The Woolmark Company's Wool Blend Performance certification mark.

The product development and collaboration between Vivobarefoot and AWI is part of the in-kind service that AWI offers Woolmark licensees and has not involved any financial outlay by AWI. Moving forward, wool will be adopted as a core material across all Vivobarefoot's products and AWI is already working with the brand on its next project.

AWI CEO Stuart McCullough says he has been delighted with the results of the product development between the two companies.

"The success of Merino 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. Innovative design and manufacture enhance wool's natural performance benefits – such as breathability, odour resistance and comfort next to the skin, which are so important in footwear products like those produced by Vivobarefoot," Stuart said.

The new wool footwear range was promoted by Vivobarefoot on the home page of its website and a dedicated wool social media campaign. The range also features in AWI's Feel Merino campaign (see page 6). **B**

MORE INFORMATION
www.vivobarefoot.com/woolmark
www.woolmark.com/vivobarefoot



The footwear in the new range proudly display the Woolmark logo prominently on the heel. This image of the men's **Magna Trail** outdoor shoe was used by Vivobarefoot in its promotion on social media.

EMU AUSTRALIA

EXPANDS WOOL SNEAKER RANGE

Iconic Australian brand EMU Australia has expanded its collection of lightweight and machine washable wool sneakers for women and kids, due to healthy demand from consumers across the world.

Thanks to more active lifestyles and casual approach to dressing, sneakers are undoubtedly one of the most popular items in people's wardrobes – and wool sneakers continue to gain traction in this market.

Last year, EMU Australia launched a range of wool sneakers for women and kids, that are lightweight, odour resistant, comfortable and best of all machine washable. The sneakers proved very popular with consumers – and EMU Australia has now expanded its range to include two more styles for women and three more styles for kids.

The premium sneakers with wool uppers are subtle in design, meaning they can be worn well with everything from active wear to street casual. They are a trans-seasonal sneaker that can be worn all year round.

"Sales of our wool sneakers have been really strong and exceeded our expectations," said EMU Australia's Global Marketing Manager, Rebecca Fett.

"In fact, we sold out in Australia after first launching them both through our retail customers and our online store. We have

sold our wool sneakers into all of our global markets including the United States, Canada, United Kingdom and Europe, Asia and of course Australia and New Zealand.

"We are delighted to have now expanded our range of wool sneakers and are rolling them out right across the world."

Available in Australia, the new Lyons and Blyton Multi styles for women complement the already popular Barkly style. Dress these up or dress them down – these are shoes with boundless spirit at their heart.

For kids, the new Mills style complements the Moreton and Becher styles available in Australia, with two further new styles launched overseas. The kids' sneakers are designed to take young ones on their day-to-day explorations and with a gentle machine wash, the sneakers are refreshed and ready for their next adventure.

This innovative new collection from EMU Australia talks directly to the company's DNA – natural materials, comfortable, innovative and superior quality. EMU Australia is a Woolmark licensee and is famous worldwide for its sheepskin footwear. **B**

MORE INFORMATION
www.emuaustralia.com.au

The new **Mills Mesh Multi** is a wool sneaker for kids.



The new **Blyton Multi** is a lightweight women's sneaker made with wool uppers.

WOOL WEEK UK

UNITES STUDENTS AND BRANDS

The Campaign for Wool's 2020 Wool Week in the UK showcased the results of a year-long student design competition, bringing together leading brands and retailers across a variety of wool product types with universities throughout the UK.

The Campaign for Wool's Wool Week in the UK returned this year in October, with its much-loved Student Design Competition. 2020's year-long competition challenged students to create innovative and exciting products made from wool.

The fashion and interiors brands and industry partners involved in the project included Marks & Spencer, Hackett, Lovat Mill, Anderson & Sheppard, Abraham Moon & Sons Ltd, Holland & Sherry, John Smedley, Celtic & Co, Brora, Finisterre, Floor Story, Harris Tweed Hebrides, Blackhouse, Margo Selby, Botany Weaving and Alternative Flooring.

The brands had the opportunity to choose their favourite product from the students' submissions, with a selected number from the 12 winning items being made available for sale in stores.

"This year's Student Design Competition was an ideal opportunity for the worlds of textile and fashion education to connect with industry in a series of collaborations that showcase the environmental credentials and diverse applications of wool in lifestyle and fashion," said COO of The Campaign for Wool, Peter Ackroyd.

"By creating these partnership opportunities with leading brands, the students are able to add a strong commercial dimension to their course work in preparation for careers in the industry. I'm delighted to hear selected students have been offered placements with participating fashion houses following graduation."

This year marks the tenth anniversary of the Campaign for Wool. Initiated in 2010 by its patron, His Royal Highness The Prince

of Wales, the campaign raises awareness amongst consumers about the unique, natural, renewable and biodegradable benefits offered by the fibre. The initiative continues to encourage collaboration between an international community of woolgrowers, major fashion designers, retailers, manufacturers and interior designers.

The Campaign has been instrumental in educating consumers about the versatility of wool, and reconnecting them with its myriad uses – from luxurious fine Merino wool apparel through to beautiful hardwearing interior products for the home.

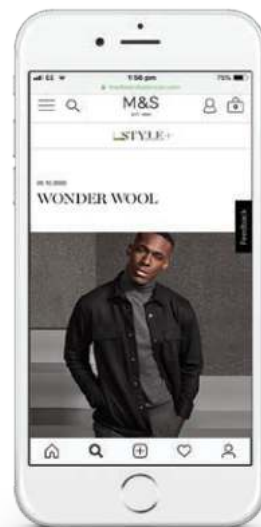
MORE INFORMATION
www.campaignforwool.org



Designed by **Courtney Davies** of Plymouth College of Art, this 100% Geelong wool jumper from **Celtic & Co** was knitted on seamless-knit technology machines. www.celticandco.com



Designed by **Georgia Alligan** of the University of Derby, this 100% Extra Fine Merino wool jumper from **John Smedley** was inspired by the White Cliffs of Dover and Durdle Door. www.johnsmedley.com



Wool apparel featured on the **Marks & Spencer** website, pictured here as part of the M&S fashion and beauty editor's pick on 5 October in celebration of Wool Week. "Biodegradable, renewable, versatile and stylish, wool is a fantastic fibre for now and always," Miranda Eason said. www.marksandspencer.com



Designed by **Louisa Knapp** of the University of Huddersfield, this woven wool cushion from **Margot Selby** features a mesmerizing motif showing the beauty of mathematical patterns prevalent in the natural world. www.margoselby.com



The women's version of **McNair's Provenance AG Merino shirt**, made with wool from 'Glencoe'.

McNAIR'S FULLY TRACEABLE MERINO MOUNTAIN SHIRT

McNair Shirts of Yorkshire has always used Australian Merino wool for its iconic mountain shirts, but the company last month achieved its dream of launching a fully traceable line of shirts, showcasing the journey that the wool takes from a wool-growing property in NSW all the way through to the final garment.

McNair Shirts was founded seven years ago on the idea of making a wool shirt based on the same type of fabric as the famous Dachstein mitts – the classic heavy duty, felted wool mitts that have been providing mountaineers and skiers with serious protection and warmth for decades. McNair's shirts are made to the highest of standards and, if their reviews are anything to go by, the company has definitely achieved its aim of making 'the best mountain shirt in the world'.

The shirts are made at McNair's factory near Huddersfield in Yorkshire, England. The company is rightly proud that its shirts are designed, spun, woven, milled and finished all within 10 miles of where they make the shirts, which enables the company to keep a very close control on quality.

REALISING A DREAM

McNair uses Merino wool from Australia in its shirts, but it was always the company's dream to have full traceability of its wool. That dream has now become a reality with the launch of its Provenance AG Merino shirts that use wool

from woolgrower Paul Simons of 'Glencoe', 30km north-east of Boorowa in NSW.

"It was a happy set of circumstances that brought us in touch with woolgrower Paul Simons. In 2017, Paul's partner Lyndall had her interest piqued by an article about McNair Shirts in *Beyond the Bale*," said Natalie Stapleton of McNair Shirts.

"With her passion and knowledge for textiles and design, and mention in the article of Huddersfield, it all seemed to link to Paul's desire to sell his wool to the UK given his British heritage. Lyndall signed up for the McNair newsletters and then in June last year while she and Paul were visiting the UK, they attended one of our events, met some of the McNair team and from that meeting, the partnership developed."

"We are proud that our 'Glencoe' wool meets the exacting standards required by McNair Shirts and that the product is fully traceable from paddock to shirt."

Woolgrower Paul Simons

Merino wool for **McNair's new fully traceable shirts** is sourced from 'Glencoe', located on the South West Slopes of NSW, run by woolgrower **Paul Simons** (right) and farm manager **Tom Simson** (left).



FROM SHEEP TO SHIRT

Merino wool was shipped earlier this year from 'Glencoe' to Yorkshire where the fibre was processed and then made into the fully traceable Provenance AG Merino shirts. To highlight the full traceability of the shirts to consumers, McNair has documented the progress of the wool 'from sheep to shirt' on its website and social media channels.

'Glencoe' is located on the South West Slopes of NSW and is made up of fertile valleys and granite slopes leading up to undulating native grassland flats surrounded by old-growth native woodlands. More than 10% of the land has been set aside for conservation.

Paul and farm manager Tom Simson are committed to their flock, animal welfare, the environment and sustainability. They are doing everything in their power to conserve the look and feel of the property and provide the best possible home for its 10,000 sheep.

Natalie says that after arriving in Yorkshire, Paul's wool is processed by some of England's most respected mills, all located close to McNair's own factory.

"We work with local companies such as Z. Hinchliffe where the wool is dyed, blended and spun into yarn. After weaving, the fabric is sent to our friends at WT Johnson who mill the material to create the luxurious soft and weather resistant material with its felt-like finish," Natalie said.

"McNair Provenance Ag Merino fabric also has silver micro particles embedded into it to give it enhanced anti-microbial and anti-viral properties so that that the shirts will be fresh, odour-free and clean for longer.

"The fabric is then transported to McNair for cutting and sewing into the Provenance AG Merino shirts, for men and women. The consensus is that the shirts are beautiful, incredibly soft and the best the company has ever made."



MORE INFORMATION
www.mcnairshirts.com/provenance-ag



INTERNATIONAL WOOLMARK PRIZE 2021 FINALISTS ANNOUNCED

Six of the world's most promising emerging design talents have been selected for the 2021 International Woolmark Prize, the illustrious fashion competition that increases the demand for Australian Merino wool by connecting emerging designers and consumers with our premium fibre.

IWP Advisory Council member, model **Naomi Campbell**.

Relaunched in 2012 by AWI's marketing arm, The Woolmark Company, the International Woolmark Prize generates long-term demand for Australian Merino wool by increasing the knowledge of and lifetime loyalty to the fibre amongst the competition's designers and alumni around the globe.

Furthermore, the phenomenal interest in these awards from fashion communities and media globally has helped put wool back on the agendas of a broader range of fashion designers, manufacturers, brands and retailers, and consequently into retail stores for consumers to purchase.

For the 2021 International Woolmark Prize, an expert Advisory Council comprising 16 leading fashion industry luminaries including model Naomi Campbell faced a tough decision choosing the finalists from more than 380 applicants from 55 countries.

The six finalists, who were announced last month, are Bethany Williams, UK; Casablanca, France; Kenneth Ize, Nigeria; LECAVALIER, Canada; Matty Bovan, UK; and Thebe Magugu, South Africa. All of them showcased a commitment to upholding the prize's pillars of product excellence, innovation, supply-chain transparency, sustainability and inclusivity.

"It is my pleasure to support the International Woolmark Prize."

Naomi Campbell

"Now more so than ever, in these incredibly challenging times for our industry, we must continue to support and nurture the emerging voices in fashion design. They are the future, and I look forward to seeing what creative and innovative work comes out of this year's entries to push our industry's ongoing

mission in diversity and sustainability," Naomi Campbell said.

In the northern hemisphere's Spring 2021, the six finalists will present a Merino wool collection highlighting transparency throughout their supply chain.

A prestigious panel of industry experts will then select the winner of the International Woolmark Prize and the Karl Lagerfeld Award for Innovation. 2021 will also see the introduction of the Woolmark Supply Chain Award, celebrating outstanding contribution from a trade partner to drive awareness for wool supply chain innovation.

All finalists will have the opportunity to be stocked in some of the world's leading stores, via the IWP Retailer Network.

INNOVATION ACADEMY

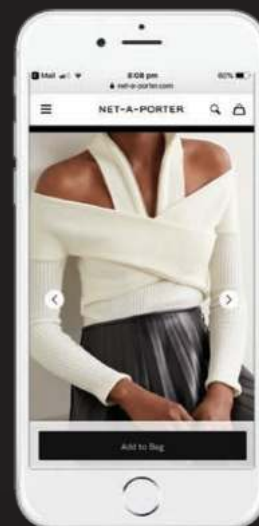
Following its introduction last year, the International Woolmark Prize's Innovation Academy program is once again supporting the finalists with early stage investment, product research and development, mentoring, networking and commerce support. This is done through the program's six industry partners, 43 international supply chain partners and nine fashion mentors.

For 2021, the Innovation Academy has expanded to supporting the IWP alumni network and other emerging designers globally through Industry Masterclasses, a series of seven live (online) talks with industry experts to provide unparalleled insights and support to grow a sustainable business. To date, the first three webinars are available on the Woolmark Learning Centre www.woolmarklearningcentre.com. **B**

MORE INFORMATION
www.woolmarkprize.com

SHOP THE 2020 INTERNATIONAL WOOLMARK PRIZE COLLECTIONS

The collections of 2020 International Woolmark Prize winner Richard Malone (Ireland), 2020 Karl Lagerfeld Award for Innovation winner BODE (USA) and finalists Blindness (Korea), Feng Chen Wang (China), GmbH (Germany) and Ludovic de Saint Sernin (France) are now available to shop at more than 100 leading boutiques and e-commerce platforms including mytheresa.com, Matchesfashion.com, Lane Crawford (China), Bergdorf Goodman (USA), Browns (UK) and BOON THE SHOP (South Korea).



Ribbed wool-blend sweater from **GmbH** available to purchase on the **NET-A-PORTER** website.

CELEBRATION OF WOMEN IN WOOL

Australia's women of wool were celebrated in October at an event at 'Anlaby Station' in South Australia, during which 120 attendees viewed the latest in wool fashion and listened to speakers including woolgrower Anthea Sutherland and renowned chef Maggie Beer.

With so many women playing an integral role in Australia's rich agricultural industry, there has never been a better time to honour our nation's female woolgrowers.

More than 120 people attended the Women in Wool event to view an exhibition of the latest wool designs and a fashion parade, listen to woolgrower Anthea Sutherland of 'Poogonook' in NSW speak of her experience at the final of the International Woolmark Prize in London earlier this year, and hear renowned chef Maggie Beer talking about her dynamic life and career.

The event was held at the historic 'Anlaby Station' near Kapunda, one of the oldest Merino sheep studs in Australia and which exported South Australia's first ever bale of wool. This year's Women in Wool event was held as part of Anlaby's annual Open

Gardens weekend.

Wool-growing women comprised the vast majority of the attendees at the special event on 8 October, with 1,500 more members of the public viewing the wool exhibits in the pavilion on the following days.

The event was hugely successful, with great enthusiasm shown by attendees to attend despite the chilly weather and COVID-19 related barriers. The speakers were well received by the audience – in particular Maggie Beer, who is a good friend of Anlaby owner Andrew Morphett, and Anthea Sutherland who as an Australian woolgrower gave insightful context to AWI activities both internationally and locally.

"It was a great day at Anlaby despite the weather – cold and wet," Anthea commented



Students from TAFE SA modelling wool garments in a fashion parade for the crowd.



Woolgrower and co-owner of Anlaby **Andrew Morphett** with guest speaker **Maggie Beer** at the event.



Woolgrower **Anthea Sutherland** of 'Poogonook' in NSW presenting to the crowd.

after the event. "The best outcome of the day I felt was the number of women of all ages who attended. From the student models on the catwalk, young mothers with babies to partners of wool-growing businesses – all ages were covered and all very interested in the day."

A wide selection of wool garments were showcased to the crowd, including garments entered into the International Woolmark Prize, commercial products in AWI's Runway Kit, designs from local South Australian woolgrower Emily Riggs who owns the Iris & Wool brand, and garments designed by TAFE SA students.

"Every year the event grows and showcases the connection between growing wool fibre and use of wool in design and fashion. We are co-dependent in generating public demand for our product: wool! It was especially pleasing to see the strong connection and enthusiasm of a new generation of female woolgrowers," Andrew said.

AWI's Penelope Keynes also spoke to the crowd about AWI's role in creating new and innovative wool garments, fostering new design talent and marketing wool to the world.

Given COVID-19 restrictions early in the planning process, AWI's grower network in South Australia, SheepConnect SA, helped organise and promote the event along with AWI and local rural and farming groups. ANZ bank came on board as a commercial sponsor.

MERINO WOOL OFFICIALLY RECOGNISED AS ASTHMA AND ALLERGY FRIENDLY

As a result of research funded by AWI, international certification body Allergy Standards Limited has officially recognised bedding products made from Merino wool as ‘asthma & allergy friendly’.

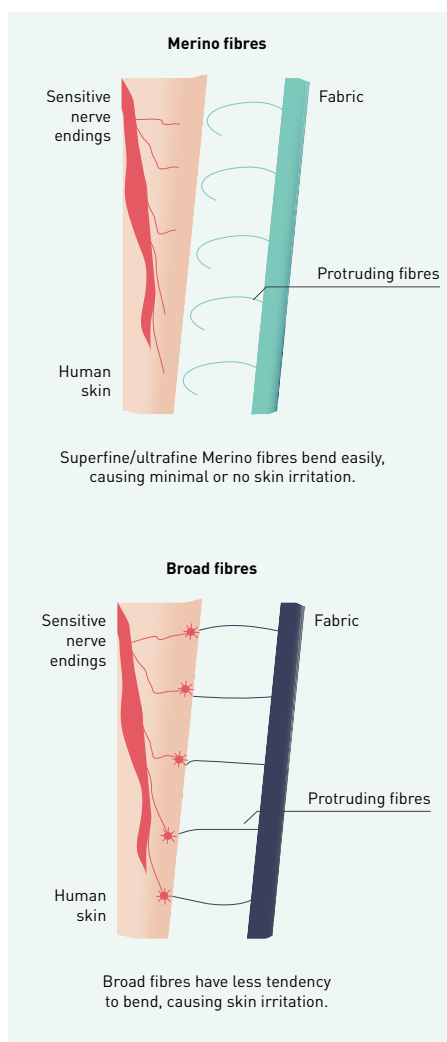
Allergy Standards Limited (ASL) prepares independent scientific standards for products with the aim to help create the healthiest possible indoor environment for individuals with asthma and allergies. ASL works with a number of patient advocacy groups, charities and government bodies across the world including the Asthma and Allergy Foundation of America.

In its rationale for issuing its new certification standard (ASP: 02-25/101) for bedding containing Merino wool, ASL references results contained in four recent research papers funded by AWI.

ASL states: “There is a growing body of evidence to suggest that high quality, fine Merino wool is non-irritant and of low risk to those with sensitive skin. A recent report reviewing the literature on the subject found that a coarse fibre diameter (>30-32µm) will induce a cutaneous irritation that is not observed with finer Merino wool. The effects on patients with mild-to-moderate Atopic Dermatitis wearing Merino clothing was also recently examined in several clinical studies carried out in Australia and the US.”

A major study funded by AWI and conducted by an expert group of allergists, immunologists, and dermatologists from across the globe, reviewed the past 100 years of research to assess claims that wool causes allergy. This analysis, published as *Debunking the Myth of Wool Allergy* in the peer-reviewed journal *Acta Derm Venereol*, found no evidence that wool is an allergen.

The study found that any skin irritation caused by a fabric was due to the incidence of coarse fibres (ie fibres with a large diameter) protruding from the fabric and that this cause is independent of fibre type; it is not due to the fibre type being wool – see diagram above. Skin irritation can just



as readily be caused by coarse synthetic fibres, such as acrylic and nylon, as by coarse wool fibres.

Importantly, the study found that suitably selected superfine Merino products are healthy for the skin, especially for those with the most sensitive skin. Superfine Merino wool fibres bend easily, causing

minimal or no skin irritation.

The study also found that known allergens applied during textile processing are minimally present in wool garments today given current industry practices and are unlikely to lead to allergic reactions.

Furthermore, other recent AWI-funded studies published in peer-reviewed journals suggest that contemporary superfine Merino wool with their reduced fibre diameters in fact benefit eczema management.

AWI Program Manager for Fibre Advocacy & Eco Credentials, Angus Ireland, says the endorsement by ASL of Merino wool was a direct result of investment in scientific research by AWI.

“Collecting the evidence that wool is not an allergen was the first step in overcoming the misconception that people with eczema or even those with sensitive skin should not wear superfine wool next to the skin,” he said.

“Our second aim was to have our research results recognised more widely by allergists, dermatologists and physicians – and so it is very rewarding to see bodies such as ASL now recognising Merino wool as asthma and allergy friendly.

“The ultimate aim is that this research will lead to increased consumer demand for products made using Australian Merino wool.”

Australia produces 80 per cent of the world’s supply of superfine Merino wool (≤18.5 micron).

MORE INFORMATION
View The Woolmark Company’s
Wool is good for the skin factsheet
www.woolmark.com/skin-factsheet/

DUVET AND PILLOW COVERS

MADE FROM 100% NATURAL MERINO WOOL

Norwegian company Lillelam has pioneered the development of 100% Merino wool duvet covers and pillowcases.

When people think of wool bedding they tend to think of duvets and blankets. However, Norwegian company Lillelam has launched a world-first commercially available duvet cover and a pillowcase made from 100% Merino wool.

Norwegian company and Woolmark licensee Lillelam was launched in 2004 and pioneered children's apparel made from pure Merino wool, which at that time was an unknown natural material for most people in the Scandinavian country.

Today, Lillelam is a market leader in Norway for children's premium clothing. Always committed to using 100% Merino wool, the company has recently diversified into bedding products for adults, developing a unique duvet cover and pillowcase made from the fibre.

The new products are machine washable and are available in a range of colours and two sizes. The products are made from 100% Extra Fine Merino wool, making them soft and comfortable against the skin.

"It has been a long process. It has taken almost four years to develop the bedding," said Lillelam founder Pernille Baylon Siem.

"It has been challenging technically to produce such thin and large panels with long wool fibres. It has never been done before. We are pleased that we are finally ready to launch pillowcases and duvet covers in 100% Merino."

The products were recently unveiled as part

of Lillelam's 'Baylon' brand, a family name that has a long history in the wool industry at Mazamet in the South of France. Pernille's mother is from Mazamet and the family's wool business flourished there for several hundred years until synthetics entered the market in the 1960s.

"This was before my time, but the love for natural fibres and emphasis on quality is a part of my upbringing and my family's passion," Pernille said. "I started Lillelam in 2004 based upon this inspiration, and I am very proud of the brand name Baylon that is a direct link to the younger days of the wool industry in my family."

Now the heritage lives on in Norway, where Lillelam combines French traditions for exquisite craftsmanship and finesse with the Norwegian passion for wool.

"We proudly display the Woolmark logo to show customers that we are serious about quality," Pernille said.


In her early years Pernille studied and worked in the arts, and it was only when she had children that her idea for a Merino wool apparel business developed.

"I searched for Merino clothes for my children – as that is what I was used to

from my childhood. But this turned out to be a challenge as the market in Norway was dominated by either synthetic fibres or lambswool. I felt a strong urge to bring Merino wool to Norway so I spent two years doing thorough research to prepare for business."

The Lillelam brand and the business has grown steadily to become a dominant supplier in the Norwegian childrenswear market. Today, Lillelam has an annual turnover of about NOK30 million (AU\$4.5 million) and 230 retailers selling the company's products throughout Norway. The company also sells worldwide via its own online store at www.lillelam.com.

Now entering the bedding market, Pernille believes that Merino wool is nature's finest fibre for this sector too.

"Wool has been used to sleep in since the dawn of time – before cotton, synthetics and before the washing machine. Merino wool is a natural fibre with unique characteristics and health and environmental benefits that these other materials cannot match." 

MORE INFORMATION
www.lillelam.com

WOOL'S ECO-CREDENTIALS SPARKLE

According to a new AWI-funded scientific study, garments made from wool are washed less frequently than garments made from synthetics, cotton and cellulosic fibres, and therefore have the least environmental impact of all these fibres during the 'use phase' of a garment's life cycle.

The new AWI-funded study, published in September in the peer-reviewed journal *Sustainability*, found that garments made from different fibres are cleaned by consumers in different ways and therefore have significantly different environmental impacts during the use phase of the garment. The results highlight the positive eco-credentials of wool.

The study states: "Laundering frequency is the most influential factor for differences in the environmental impacts per wear between garment types. Woollen garments have the lowest water and energy use per wear, as well as related [greenhouse gas] emissions, mainly due to the reduced laundering frequency."

AWI Program Manager for Fibre Advocacy and Eco Credentials, Angus Ireland, says the study demonstrates the eco-credentials of wool in a world where there is increasing concern about society's trend towards 'fast

fashion' and the effect on the environment of synthetic textiles.

"Laundering frequency is the most important indicator of energy consumption during a garment's use phase. Consumers who are aware that their wool clothes require less washing – because of wool's natural resistance to odour, stains and wrinkles – have the greatest influence on the sustainability of their garments," Angus said.

"The fact that wool clothes need less frequent washing not only reduces energy and water consumption, it also preserves the as-new look of the garment, enabling consumers to continue wearing it for longer."

The journal article is based on the results of a quantitative wardrobe survey, undertaken by AC Nielsen, of more than 200 consumers from each of China, Germany, Japan, the UK

and the USA – and additional qualitative laundry diary data of 30 consumers from each of those five countries.

The research, funded by AWI, provides quantified and robust data about the environmental impacts of cleaning different types of garments, which will help ensure accurate and positive environmental assessments for apparel products containing wool. The results will be used, for example, during AWI's engagement with the European Union's Product Environmental Footprinting initiative which is expected to soon become the most influential market-facing reporting system for environmental credentials.

Angus says The Woolmark Company funds scientific research into wool's environmental footprint to help demonstrate to the fashion and textile trades – and consumers – that wool is the 'planet-friendly' fibre of choice.

"By funding studies such as this one, we are now in a 'knowledge-powerful' position regarding the impact on the environment of wool compared to other fibres," Angus said.

"The results of this particular study indicate the benefits of focusing environmental work on consumer habits and culture, and not only technologies."

Angus added that, while the study shows that wool's eco-credentials shine during the 'use phase' of a garment due to its need for infrequent laundering, there is potential for wool's impact to be reduced even further because not everybody knows about wool's easy care attributes.

"To remedy this, AWI through its marketing arm The Woolmark Company is regularly putting out educational material about how easy and low maintenance it is to look after wool apparel," Angus said. B

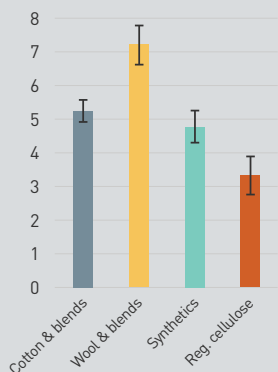
MORE INFORMATION

- View the study in the journal *Sustainability* at www.mdpi.com/2071-1050/12/18/7537
- www.woolmark.com/care

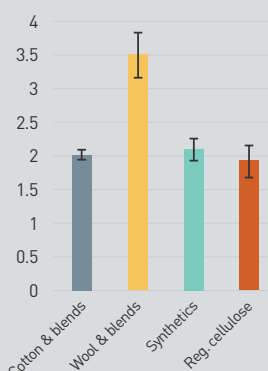


Garments made from wool are washed the least frequently (because of wool's natural resistance to odour, stains and wrinkles) and therefore consume comparatively less energy and water – which adds to wool's reputation as the 'planet-friendly' fibre of choice.

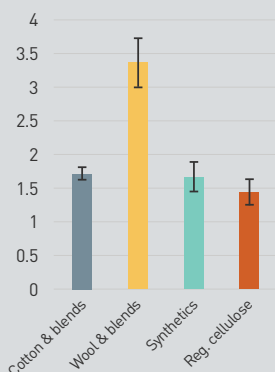
(a) Formal wear



(b) T-shirt



(c) Socks



Mean number of days garments are worn between cleaning by fibre content of (a) formal wear (suits, trousers and skirts), (b) T-shirts, polo shirts and singlets, and (c) socks and stockings.



snooza™
snooza.com.au

Media veterinarian Dr Katrina Warren with Snooza's Pet Futon made with a wool-blend batt.

DOGS DESERVE A WOOLLY GOOD SLEEP TOO

Wool bedding is not only perfect for you, but also for your dog – demonstrated by the Snooza pet futon, made with an Australian wool blend batt and one of the most popular dog beds in Australia.

Snooza is an Australian owned manufacturer and supplier of premium pet beds and related products. The company's pet futon has been manufactured for more than 25 years, with more than one million sold to date. Each futon is made of a special wool blend batt to provide superior comfort, natural breathability and temperature regulation.

The futon is made in Melbourne, with Australian wool blended with predominantly recycled PET. It is machine washable, making it ideal for working dogs as well as pets.

Media veterinarian and presenter Dr Katrina Warren has used and recommended Snooza pet beds for more than 20 years and this year joined Snooza to endorse its products.

"The futon is one of Snooza's most versatile beds and is suitable for all pets. It's a wonderful indoor bed, it's a perfect mat for a crate and it's fantastic to travel with," she said.

"It's made with an Australian wool blend mattress. Wool has unique properties making it perfect for comfort and sleep by keeping your dog warm in winter and cool in summer. This bed features the Snooza sleep system: the organic cotton covers are removable and replaceable and the whole bed is fully washable."

The futon is available in a range of sizes and different colours.



MORE INFORMATION
www.snooza.com.au/collections/pet-futon

LEARN ABOUT WOOL

RESOURCES ARE A HIT



Carlingford West Public School student **Krithish Karthik** demonstrating the wool processing machine that he invented (above) and AWI's Learn About Wool resource kit in his classroom (below).

Used by primary and secondary schools across Australia, AWI's Learn About Wool resources describe in detail the on-farm production, processing, marketing and fashion aspects of Australian wool.

Aligned to the Australian Curriculum, the educational package offers opportunities for teachers to incorporate wool into everyday classroom activities through science, design and technology, geography, history, the arts and economics and business.

Above all else, Learn About Wool is designed to engage and excite students. And this certainly has been demonstrated at Carlingford West Public School in Sydney, according to Year 3 teacher Adam Jones.

Adam says he used the Learn About Wool outline resources to educate his students about wool processing.

First launched in 2013, AWI's Learn About Wool education resources continue to help teach students about the natural benefits of Australian wool and the production process of wool products. Nine-year-old student Krithish Karthik from Sydney recently demonstrated great initiative to invent and build an innovative wool processing machine.

"My class was very excited to learn all about the manufacture and wool making process. We learnt about various techniques involved in the process such as carding, dyeing, weaving and spinning. As an opt-in extension task, I gave some of the students the opportunity to design and manufacture a machine which would innovate, aid and assist the wool manufacturing process," Adam said.

"One of my students in particular, Krithish Karthik, showed great enthusiasm and completed this task to design a machine from home which washes, cleans, cards, dyes and dries wool, all made from common resources accessible around his home."

KRITHISH'S INNOVATIVE INVENTION

Krithish used a modified jerry can for the main body of the machine, with an electric screwdriver as a motor to turn drums on the inside of the jerry can and thereby wash (scour) the wool using water, shampoo and the mechanical action of the turning drums. The two drums were made out of a pencil holder and small basket, with cut-off cable ties for spikes. He then used a hair dryer inserted in the side of the jerry can to dry the wool during the rotation of the drums, which ensured good air circulation.

Krithish's approach to carding the wool was very innovative. He used the same two drums as for the washing but this time immobilised the outer spiked drum while moving the wool using the inner drum. In this manner, the wool fibres were separated and straightened (suitable for spinning into yarn).

Krithish used food colouring to dye the wool, again in the machine which was good science as the movement of the wool through the bath ensured the dyeing was even.

The students were required to record a video to provide a detailed explanation of their machine and how it works. View Krithish's video at <https://tinyurl.com/yxm29sah>

WONDERFUL WOOL EDUCATION

AWI General Manager of Processing Innovation & Education Extension, Julie Davies, congratulated Krithish on his achievement and sent to him a certificate in recognition of his outstanding project.

"Krithish demonstrated innovation and his presentation was clear, informative and well presented – and the science of his project was completely correct. It is wonderful to see bright young minds with so much creativity and enthusiasm," Julie said.

AWI also sent a Learn About Wool resource kit to the class at Carlingford West Public School. The kit includes real fibre, yarn and fabric samples, factsheets and posters.

"Krithish was over the moon to receive a personalised letter from industry professionals and carries the certificate with him everywhere. It really means the world to him," Adam said.

"The class too were overjoyed to read through the fascinating information resources and posters. They absolutely loved having the samples of wool to feel and observe at each of the stages. These resources will receive great use for the students now and in years to come."

MORE INFORMATION

The free Learn About Wool kit can be ordered via the www.learnaboutwool.com website. Please note, there is a limit of one per school.





180 Year 6 students from Sydney's Carlingford West Public School learnt about the wool industry live from six AWI-supported Young Farming Champions, including Danila Marini (pictured).



YOUNG FARMERS BEAMED INTO CITY CLASSROOMS

Students from Carlingford West Public School recently found out what a farmer in the 21st century looks like, when six Young Farming Champions were beamed directly into their classrooms, thanks to the 'Paddock Pen Pals' initiative from Picture You in Agriculture in association with AWI.

Paddock Pen Pals is a school-based program that utilises video conferencing sessions so city school students can see and talk live with real farmers about their daily life and jobs.

Six Young Farming Champions recently took part in the educational initiative at Sydney's Carlingford West Public School, a large inner-west primary school with a high percentage of English-second-language students.

"Many of my students have little time outside and have never visited a farm," teacher Zoe Stephens said. "In order to make their learning relevant, it's very useful to connect them to real farmers to see what real farms are actually doing in Australia.

"Before we started, I sat down with the Year 6 cohort [more than 180 students] and asked them what they thought of when they pictured a farmer. You can imagine the comments – someone out in a field sucking on a bit of straw, big hat on and always a male. So then I said 'next week you'll actually get to chat with some farmers and they're all young women' and their mouths just hung open. It was amazing to have six young women to talk with us, particularly incredible because we are really breaking that stereotype of who is a farmer."

YOUNG FARMING CHAMPIONS

The six female Young Farming Champions, who were each paired with a separate Year 6 class for a half hour presentation, all work in different parts of the wool industry:

- **Chloe Dutschke** is a contract musterer who amazed the kids with the size of a property with 18,000 sheep.
- **Lucy Collingridge** is a biosecurity officer who had a great discussion about the sustainability of the wool industry and was pleased to note that the kids all knew about renewable resources and the unsustainable process to make synthetic fibres.
- **Dione Howard** is a veterinarian who spoke about animal health.
- **Katherine Bain** is a business analyst who introduced the kids to her sheepdog and got to show them a video of sheep being moved in the yards which caused a lot of excitement.
- **Sam Wan** is a wool broker who showed the students a range of woollen products.
- **Danila Marini** is a researcher who described her research into virtual fences.

"All our farmers had something different to offer and this broadened the students' understanding of the industry beyond sheep growing wool," Zoe said.

"Our big question was how are our farming industries implementing sustainable practices. Having a dedicated Young Farming Champion for each class meant the students got a very one-on-one conversation with these farmers and I think that gave them more connection with who they were talking with."

GIVING BACK

For the Young Farming Champions, Paddock Pen Pals was another way to give back to the wool industry.

"I grew up only half an hour from Carlingford West – these students were me – and I had no idea about wool at their age," Sam said. "I was excited to talk to the next generation of wool consumers about the benefits of wool and wool's importance in Australia and of the career opportunities available. I even got a message from AWTA managing director, Michael Jackson, reminding me he went to Carlingford West, and then had a successful career in the wool industry!"

For Zoe, this was the second year she had participated in Paddock Pen Pals and she now has a strong understanding of the world of wool.

"However, there is no comparison between me standing up in front of the students and telling them what I know about wool to having an actual farmer, standing in a field, talk with them."

AWI has supported the Young Farming Champions initiative since 2012. Young Farming Champions share their knowledge of agriculture and the wool industry with school students across the country, helping to bridge the divide between city and country areas.

The Young Farming Champions program provides a great platform to spark the next generation's interest in a career in the wool industry. **E**

MORE INFORMATION
www.wool.com/yfc

TOP MARKETING STUDENTS WORKING WITH WOOL

As part of their studies at the prestigious ESCP business school campus in Paris, leading marketing students have been set the task of developing a marketing campaign for Australian wool focused on sustainability – and they have been helped by having woolgrower Simon Cameron beamed across the world to tell them about the initiatives on his property in Tasmania’s Midlands.



Founder and CEO of Australian menswear brand M.J. Bale, Matt Jensen, with Simon Cameron at Kingston.

from ‘Kingston’ in the Tasmanian Midlands, who runs 5,000 superfine Merinos on his 3,000-hectare property.

Simon had just finished shearing on the property that day and was excited to speak via video conference to the students on the other side of the world: “I don’t get cell phone reception here on the farm, but here I am talking to you around the globe – it’s quite extraordinary!” Simon said.

“The Australian wool industry has a really long supply chain and there is a great distance between woolgrowers and the majority of our consumers. Wool is a wonderful natural fibre and the sheep that produce that fibre are important for helping maintain our land and biodiversity. We need you to communicate our message and to help us to maintain a viable industry,” he told the students.

Simon said his approach to running his business is based on continuous improvement. This relates to the genetics of his sheep, technology (such as electronic ID which helps him monitor the performance of his sheep) and, very importantly, land management.

About 12 per cent of Kingston is developed, high productivity pastures (for breeding and young sheep) while the rest is native bush that contains the best examples of what is left of original native grasslands in Tasmania, with 14-15 threatened or endangered plant species that are found in very few other places.

“At Kingston, our goal is to combine the best traditional superfine wool production with benchmark natural values management. We’re not just selling wool, we’re selling the way we produce that wool, the way we look after our animals and the way we look after our land,” Simon said.

“A farm like this that’s managed in a low impact way also enables us to sequester far more carbon than we are emitting. We’re involved in a trial to see what impact a diet of methane-reducing seaweed has on the sheep – we care about these things and look for ways to meet customer expectations.”



Woolgrower Simon Cameron presenting from Tasmania via video conference to marketing students at the prestigious ESCP business school in Paris.

AWI subsidiary The Woolmark Company continues to foster the education and development of tertiary students, inspiring them in the early stage of their careers about the properties and benefits of Merino wool. While AWI’s focus is primarily on textile and fashion students, AWI also engages with leading students studying other related disciplines.

An example is The Woolmark Company’s office in France which recently ran an educational project with marketing students at one of the most selective French universities, ESCP, which is the world’s oldest business school and is currently ranked fifth in the world.

Six selected ESCP students studying for an MSc in Marketing & Creativity undertook a three-month consultancy project for which they were set the challenge of developing for The Woolmark Company a marketing campaign focused on sustainability.

For the six students – who originate from Italy, Mexico, India and France – the project provided them with a collaborative learning experience in which they could demonstrate in a real-world application the concepts and

tools being studied during their degree.

As well as the six students receiving an education about the natural performance benefits and eco-credentials of wool, the project will also result in a campaign strategy (covering marketing, communication, media and PR) presented by the students that The Woolmark Company can consider for its marketing activities going forward.

The project kicked off in September, with the students receiving presentations (via video conference) from The Woolmark Company, specifically a ‘Fibre to Fashion Masterclass’ from Corporate Affairs and Business Development Manager (France), Aurelia Vigouroux, and Marketing Project Officer (France), Ines de Sabbathier; a briefing on sustainability in the wool industry by Program Manager for Fibre Advocacy & Eco Credentials, Angus Ireland; and a briefing on sustainability in a campaign by General Manager for Marketing Communications, Laura Armstrong.

A highlight for the students was a presentation on 22 October by sixth-generation woolgrower Simon Cameron



SIMON AND HIS CUSTOMERS

Simon told the students that he regards Kingston as having three sets of customers. Firstly, the mills to which he sells his greasy wool and the retailers and consumers down the supply chain that buy the product.

"However, secondly, consumers need to buy 'the message' of us looking after the land. So I have an arrangement with the Midlands Conservation Fund which pays me for the way that I have committed to look after half of my land.

"And my third set of customers are the future generations. It's important to me to leave this land in a better condition for those that follow."

Simon stressed the importance of others in making the best of each clip using the shearing team as a great example.

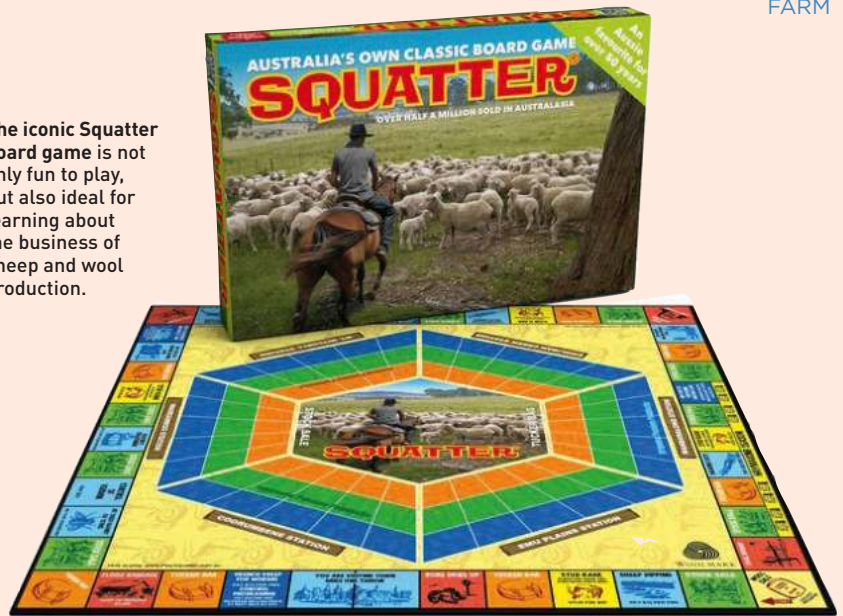
Simon also talked about his collaboration with Australian menswear brand M.J. Bale, a partnership spearheaded by founder and CEO Matt Jensen. He sells wool directly to Italian fabric manufacturer Vitale Barberis Canonico. M.J. Bale uses the fabric in its single origin Kingston Collection, which it retails through its stores.

"Through this supply chain collaboration, we're tapping into consumer sentiment and addressing consumers' desire for traceability," he said.

"The wool that I sell for the suits is done on normal market terms, but where I get the benefit is that a percentage from each suit sold comes back to the farm and the consumer knows that it will be reinvested into projects that help maintain the landscape, natural values and enhance biodiversity." B

MORE INFORMATION
www.creativitymarketing.org/consultancy_projects
www.mj bale.com/pages/kingston
www.woolmark.com/kingston

The iconic Squatter board game is not only fun to play, but also ideal for learning about the business of sheep and wool production.



SQUATTER

AUSTRALIA'S CLASSIC SHEEP FARMING GAME

The iconic and entertaining Squatter board game about Australian sheep farming has been rereleased with an endorsement from The Woolmark Company.

Squatter is the entertaining board game based on real-life sheep farming. But much more than just fabulous fun, a game of Squatter is highly educational for all ages. Players learn about sheep farming, the wool industry, business management and much more.

As with actual sheep farming, the game is a mix of luck and strategy. Every game brings new challenges. Chance plays a part because no one knows when the next drought, bushfire or flood will strike. Prudent players employ good strategies and careful management to protect their farming business, reduce risks and achieve optimum results.

While Squatter is designed to entertain adults, children from about age 10 also enjoy playing. Squatter enables several generations to take part on an equal footing. Chat and laugh with your friends and family while you discover the challenge of battling the weather and fluctuating stock prices, repairs to the shearing shed, liver fluke and red legged earth mite.

Squatter can be played with 2 to 6 people. It creates winners, not losers and one of the great things about Squatter is that everyone stays in the game until the end.

The game was invented by Robert Lloyd who had worked at 'Coorumbene' in South Gippsland, which ran sheep, and then as a

travelling sales rep for Dalgety's Ltd. Squatter was first released 58 years ago at the Royal Melbourne Show in 1962 on the Australian Wool Bureau stand and has gone on to achieve more than half a million sales.

WOOLMARK ENDORSEMENT

Already featuring the Woolmark logo, which is owned by Australian woolgrowers, Squatter was re-endorsed by AWI's subsidiary The Woolmark Company in August for the game's relaunch.

"The Woolmark Company has approved the use of the Woolmark logo on the game because of the relevance Squatter has to the wool industry," AWI CEO Stuart McCullough said.

"There is no doubt that the game Squatter is helping create a better understanding of the industry which represents a vital part of Australia's economy.

"Based on sound stock raising principles, it has proven appeal to both city and country people. In the country it could be helpful to those young people interested in a rural country career, while for city dwellers it is an informative and entertaining link with an industry resplendent with social, historic and economic heritage." B

MORE INFORMATION
www.squatter.com.au

WOOLMARK LEARNING CENTRE

NEW RESOURCES ADDED TO POPULAR ONLINE PLATFORM



The Woolmark Learning Centre is also a useful resource for woolgrowers wanting to gain a greater knowledge of what happens to wool post-farmgate.

The Woolmark Learning Centre is a web-based hub that houses free world-class educational resources about wool, from farm through to manufacture and design, for learners at all levels, including those entering the global textile industry as well as those already in it.

The site, available at www.woolmarklearningcentre.com, was officially launched in mid-December 2019, and has had about 60,000 users with 106,000 sessions and more than half a million page views. The top countries accessing the site are India, Australia, UK, US and China.

Educating the textile supply chain about wool is a key strategic pillar within AWI's business.

"The web-based Woolmark Learning Centre has been developed to capture the specialist knowledge of global industry experts and provide open-access to their expertise, knowledge, knowhow and industry intelligence. The wool fibre to garment process is a complex journey, and to equip current and future designers with the skills and technical knowhow to design and manufacture with wool, we educate along

With there never being a better time to learn online, the Woolmark Learning Centre is proving to be very popular for professionals and students all along the textile supply chain, with the platform achieving more than half a million page views to date. New educational resources continue to be launched, including last month a new flagship course on commercial-scale knitwear design and manufacture.

"The suspension of so much face to face schooling in countries across the globe due to the coronavirus pandemic demonstrates how important platforms such as the Woolmark Learning Centre now are for education."

Julie Davies, AWI General Manager

the entire wool supply chain," said AWI General Manager for Processing Innovation & Education Extension, Julie Davies.

Developed by industry experts in the textile industry, the digital platform and coursework are structured to facilitate both fundamental and masters-level education. It is also a useful resource for woolgrowers wanting to gain a greater knowledge of what happens to wool post-farmgate.

Free to access, 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 in the world. The platform allows learners to complete courses specific to their needs, at their own pace.

On completion of the courses, users gain their own certification from the internationally recognised Credly digital credential platform, which can be displayed on the user's own digital professional portfolio such as LinkedIn.

NEW FLAGSHIP KNITWEAR COURSE LAUNCHED

"The Knitwear Design and Make course offers users advanced insights and essential knowledge of one of the world's most important textile processes."

Julie Davies, AWI General Manager

Already housing a technical program on wool processing and insights from industry leaders, the Woolmark Learning Centre last month launched a Knitwear Design and Make course, the first course in its new Fashion and Design program.

WOOLMARK LEARNING CENTRE PROVES POPULAR

- 60,000 users
- 106,000 sessions
- 500,000 page views

This flagship knitwear course provides extensive knowledge of the commercial-scale design and mechanised manufacture of wool knitwear garments. The course takes approximately eight hours to complete.

"The Knitwear Design and Make course is a rich educational opportunity for the global textile and fashion industry, covering topics from the evolution of knitting technologies, to key knitted structures and the latest technologies for knitwear production," Julie said.

Ideal for fashion designers, brands, manufacturers, tertiary students and tutors, the course will be promoted by AWI to these target audiences through a digital engagement strategy that includes social media advertising and an email campaign. **B**

MORE INFORMATION
www.woolmarklearningcentre.com



A flagship Knitwear Design and Make course has been added to the Woolmark Learning Centre, the online platform that has been developed to educate the global textile supply chain about how to use Australian wool, thereby increasing demand for the fibre.

AWI WORKING TO SUPPORT THE FUTURE OF AUSTRALIAN WOOL-GROWING





The prototype of Hugh McKay's fully automated 'Smart Fencer' (with 50 posts loaded on to it), which could revolutionise the process of installing a fence.

FENCE BUILDING

SMART AND EFFICIENT

26-year-old Hugh McKay has developed the prototype of an automated trailer system for building farm fences. It is aimed at removing the physical labour and vastly decreasing the time normally required for installation.

Agricultural fencing is essential on all livestock farms, but installing it is a costly, time consuming and labour-intensive process. However, there could soon be a much cheaper and effective solution, thanks to a project that has been undertaken through an AWI-sponsored Science and Innovation Award for Young People in Agriculture.

A dislike for installing fencing on his family's sheep and cattle property at Henty in NSW was the impetus for Hugh McKay to work on developing a fully automatic fencing trailer.

"I've always thought fencing was a very slow and tedious process, moving back and forth up the fence a number of times. So I decided to apply my product design engineering background and develop a fully automated fencing trailer, the Smart Fencer, which can be towed by any standard ute," Hugh said.

"While there are some products on the market that help speed up some components of the fence (post drivers or wire spinners) there is yet to be a completely automated solution that will complete a fence in one run."

HOW THE SMART FENCER WORKS

The Smart Fencer is being designed to use GPS technology that enables the operator to plot out the position of the fence to centimeter accuracy. Using this technology, the operator should be able to quickly and easily see the distance that the fence will cover, the number of posts that will be needed, the amount of wire and netting that will be required, as well as an accurate estimated time of installation with the Smart Fencer.

Inside the trailer is a large feeder system capable of holding 50 posts, which can be loaded up easily and quickly at the beginning of the run. Several wire spools can be loaded with either plain, barbed or prefabricated wires to be spun out for the fence.

Once the trailer is loaded, the user drives to the start of the fence where a localised screen in the cabin directs the driver to the first post position. When the trailer is within a designated range of the post position, the post is grabbed mechanically and moved to the exact position and pounded into the ground to the desired height. Once completed, the driven post is released, the driver is directed forward to the next post position and the cycle is repeated.

The Post Donger is positioned on a set of rails and can move side to side and forward and backwards, allowing the vehicle driver to only need to drive within the desired one metre range of the post. Wires and netting are tied to the first strainer post and spun out as the post are rammed into the ground.

HUGH'S HUGE PROGRESS

Hugh has put a lot of effort into developing the Smart Fencer prototype and has been mostly successful in his ambitious goal of automating the fencing process. Impressively, Hugh has done all the design, coding, engineering and manufacture of the prototype himself, in a relatively small timeframe and with a limited budget.

"While I am extremely proud of the progress and accomplishments so far, there is

still a long way to go to turn this prototype into a commercial product. The GPS component of the machine has been a big hurdle to overcome, but with a few recent advancements and some new assisting technology, I'm excited that the machine is entering the final stages of development," Hugh said.

"In the beginning of the project, I decided to break down the machine into achievable smaller sub-assemblies, which I could tackle one at a time. Throughout the construction process I have been busy testing different components of the machine and now refining each component to work together at the correct timing.

"Once the software development and timing of the machine is finalised, there will be a large amount of time testing, trialing, and optimising of the machine over the coming months. The machine will need to be tested in a variety of terrain, soil and weather conditions, with different posts and wires, to make the process as quick and efficient as possible."

The Science and Innovation Awards for Young People in Agriculture are coordinated by ABARES and are open to young people aged 18-35 years working or studying in rural industries. The annual awards aim to encourage the uptake of science, innovation and technology in rural industries. **B**

MORE INFORMATION
hugh.mckay94@gmail.com
www.wool.com/scienceawards
 Hear more from Hugh McKay in Episode 142 of AWI's The Yarn podcast, available at www.wool.com/podcast



RESEARCH INTO INTENSIVE PRODUCTION SYSTEMS

Andrew Rolfe from Cooma in NSW has been awarded a 2021 Nuffield Scholarship supported by AWI and will research intensive management techniques and models for Merino sheep production.



Nuffield Scholarship recipient **Andrew Rolfe** from Cooma, NSW.

Andrew is part-owner of family farming business, Kenilworth Grazing, a self-replacing Merino flock enterprise comprising 5,600 ewes across 4,100 hectares. He is also a private agronomy consultant in his local area.

Experiencing the impacts of prolonged drought first-hand, Andrew is particularly focused on how intensified best practice management techniques can be utilised to drive Merino production and drought preparedness.

“Forced to adapt our production system on-farm during the drought, we learnt that it is possible to increase your flock whilst effectively managing ground cover and preparing for dry times,” Andrew said.

“Intensifying production systems during median seasons through confinement feeding, increasing forage crop production and closer stock management for example, offers potential for producers to retain fodder and trade stock opportunistly.

“Through my Nuffield Scholarship, I plan to identify and combine global best management practice techniques, to develop an intensive management system that will enhance production and drought preparedness for Australia’s Merino sheep industry.”

By supporting the Nuffield Scholarship program each year, AWI is increasing farming knowledge and management skills in the Australian wool industry. **B**

MORE INFORMATION

Information on previous AWI Nuffield woolgrower scholars and their reports are available at www.wool.com/nuffield



Hear more from Andrew Rolfe in Episode 151 of AWI’s The Yarn podcast, available at www.wool.com/podcast

THE YARN PODCAST FOR WOOLGROWERS ON THE GO



THE YARN PODCAST IS AWI’S WEEKLY FREE AUDIO REPORT

- Hear the latest news, market intel and stories from woolgrowers and stakeholders along the global supply chain.
- Learn more about AWI’s projects from the people at the cutting edge of R&D and marketing.
- Each episode averages about 20 minutes in length.

- It can be listened to on a smartphone, tablet or computer.
- There is an archive of more than 150 episodes which have been listened to more than 250,000 times.

GET MARKET INSIGHTS FROM THOSE ON THE GROUND

- How are retail and manufacturing markets faring during the COVID-19 pandemic?
- How are markets responding to second waves of the pandemic and new lockdowns?

Listen in to learn from AWI’s international managers on the front line.

HOW TO ACCESS THE PODCAST

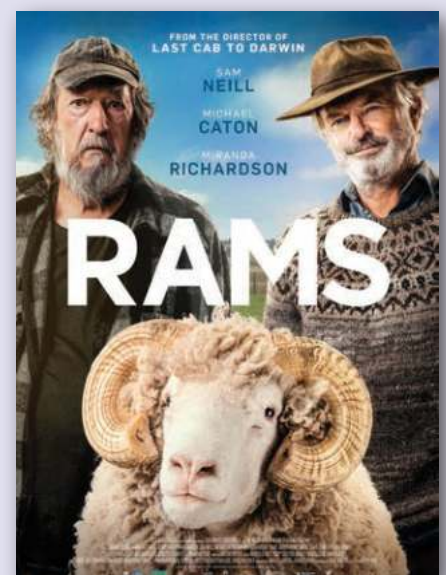
You can simply listen at www.wool.com/podcast **OR** on Spotify **OR** download the podcast to your iPhone.



ACTOR MICHAEL CATON JOINS THE YARN

The Yarn is an audio podcast, but Episode 149 was a little bit different – it was video podcast. In this special episode, one of Australia’s best loved actors, Michael Caton, discussed his latest film *RAMS* (also starring Sam Neill and Miranda Richardson) which explores the very real issue of an exotic disease outbreak in a sheep community.

Listen – and see – Michael as he joins AWI’s General Manager for Woolgrower Engagement, Marius Cuming, to talk about his own experience in the wool and farming industries and how accurate the film is in depicting how much sheep mean to the people who work with them, care for them and are defined by them.



AWI CHANGE MAKERS

ONLINE R&D EXTENSION ABOUT SHEEP PRODUCTION

AWI has begun using online short videos to communicate research findings on sheep reproduction topics. This new online initiative from AWI, titled AWI Change Makers, aims to help woolgrowers implement best practice in their flocks.

“We all want to be better sheep producers but the only way we can be better is to change. If we keep doing things the same way we have always done them, we’ll keep getting the same results we’ve always got,” says leading livestock consultant, Nathan Scott of Achieve Ag Solutions in Victoria.

That’s why Nathan has joined with AWI to produce AWI Change Makers: a new ten-part series of short videos that will demonstrate practical ways that woolgrowers can implement the outcomes of AWI-funded R&D in their own businesses.

The videos (each about 3-5 minutes long) in the first series will cover sheep reproduction topics including ram health, preparing and managing ewes for joining, pregnancy and lambing, and weaning management.

Nathan says the AWI Change Makers series will provide woolgrowers with timely, technical management tips that they can use on-farm now.

“It is a great new initiative from AWI to provide research outcomes to growers in a really quick and accessible format. The AWI Change Makers series is designed to start conversations for producers as we bring them information and help them identify opportunities for change,” Nathan said.

Easily accessible to woolgrowers right across Australia at any time, three videos have been released so far online at www.wool.com/awichangemakers. As with all videos, when viewing you can pause and go back to an earlier part of the video if you want to recap.

EPISODE 1: LAMBING MOB SIZE

It is important for woolgrowers to consider their lambing mob size because it can have a significant impact on lambing rates, particularly in twin mobs. Watch the 3½ minute video to hear Nathan outline why mob size matters and practical management tips. For further information on how to estimate your optimum mob size, head to www.wool.com/mobsiz

EPISODE 2: WEANING TO MANAGE

Weaning is important for the ewe and the lamb; learn how to manage ewe condition and lamb growth rates for their next steps. Watch the 4½ minute video to hear Nathan outline why timely weaning is important and what you can do. For further information and to

access AWI’s standard reference weight (SRW) calculator and weaner management checklist, head to www.wool.com/weaning

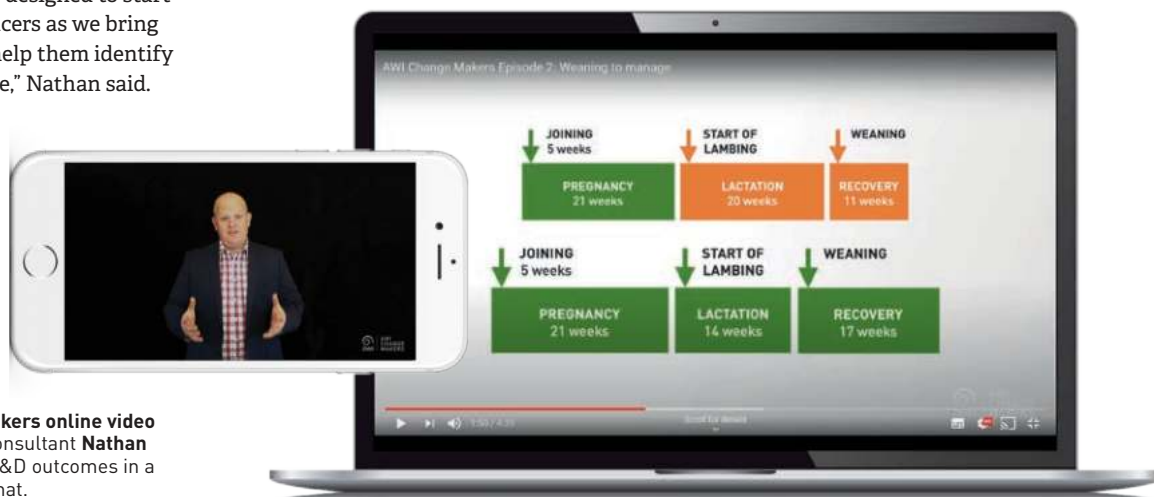
EPISODE 3: RAM PERFORMANCE MANAGEMENT

Rams are high performance animals that work hard over the joining period. They contribute half of the genetics of their progeny and are the primary drivers of genetic improvement in a flock, so need to be given every opportunity to pass on their genes. Watch the 5 minute video to hear Nathan outline why it’s so important to manage your rams to be in peak physical condition and sperm production, and practical management tips to help you achieve your joining goals. For further information and tips for ram preparation and management, head to www.wool.com/rams

More episodes in the series will be released during the coming months. **B**

MORE INFORMATION

View the videos at www.wool.com/awichangemakers



In the new AWI Change Makers online video series, leading livestock consultant Nathan Scott presents the latest R&D outcomes in a simple and accessible format.

GRAZING SHEEP ON MODERN STUBBLES



Sheep grazing stubble at Woogenellup,
50km north of Albany in the WA Wheatbelt.
PHOTO: Posnov

In many mixed farming areas of southern Australia, crop stubbles play an important part in feeding sheep flocks during summer. However, modern crop stubbles are notoriously variable in quality. A new guide for sheep producers provides up to date information on the nutritional value of stubbles and chaff piles of modern crop cultivars harvested with modern equipment.

The main feed value of stubbles is in the spilt or unharvested grain. However, the efficiency of harvesting crops has improved in past decades and this has resulted in stubbles with less grain. Furthermore, other factors such as new crop cultivars have affected the nutritional value of modern crop stubbles.

A project undertaken by CSIRO, with funding from AWI and MLA, has provided a new guide for sheep producers to the nutrition and management of sheep grazing modern stubbles in mixed farming areas.

The CSIRO research team investigated the current use of crop stubbles in mixed farming regions of WAs wheatbelt. In mixed farms where stubbles are grazed, stubbles usually make up 15% to 25% of the feedbase. About 60% comes from green and dry pastures, and the remainder comes from forage crops, dual-purpose crops, perennial forage species, or supplementary feeding. The researchers found little difference in the feedbase between livestock or cropping dominant farms.

GRAZING STUBBLES IN THE FEEDBASE

Sheep grazing stubbles are highly selective and prioritise eating the high feed-quality spilled grains and any green pick when these components are available. Leaves and fine stems are low quality but generally edible, while ripe wheat stems are poorly digestible.

How the farmer prioritises the stubbles for grazing will depend on the type/class of livestock. Ewe lambs should be given access to the highest quality stubbles, followed by ewes that are pregnant or in preparation for joining. Older or dry ewes are grazed on lower quality stubbles, such as those that have already been grazed or wheat and canola stubbles.

Adequate nutrition is paramount for all the animals, so supplementary feeding could be required. In particular, producers should aim for any pregnant ewes to have a condition score of at least three at lambing to minimise mortality and optimise wool and meat production of their lambs.

Supplementary feeding can extend grazing of stubbles, both by helping reduce weight loss as stubbles become depleted and increasing the utilisation of low-quality stubble forage.

The provision of high protein supplements such as lupins and peas will help ensure sheep meet their protein requirements when grazing cereal stubbles, which have a low protein content. This is particularly important for young, growing sheep, which have higher protein requirements.

Sheep grazing stubbles will also eat mineral mixes, which can improve their nutrition.

The *Grazing modern stubbles* guide shows the nutritive value of a range of grain, hay and chaff, compared with the requirements of sheep for maintenance.

OTHER CONSIDERATIONS WHEN GRAZING STUBBLES

Ensure a decent **water supply** because stubble is a dry feed with typically less than 10% moisture content. A single sheep will require at least 3-5 litres/day when grazing stubbles, but more if it is provided a salt supplement or the paddock contains saltbush.

Sheep, and particularly lambs, that do not have access to green feed should be supplemented (drenched or injected) with **Vitamin E** to avoid

white muscle disease. Alternatively, adjacent areas of perennial grasses and shrubs can provide a useful source of Vitamin E.

If sheep are being introduced to grain, introduce it slowly to avoid **acidosis** which can kill sheep. Alternatively, start by grazing barley or lupin stubbles prior to being moved to wheat stubbles.

Take steps to ensure sheep are not exposed to **toxins** when grazing lupin stubbles or annual ryegrass.

GRAZING BENEFITS THE CROPPING ENTERPRISE TOO

As well as filling the summer feed gap, grazing stubbles has advantages for the cropping side of a mixed business, including:

- Reducing summer weed numbers
- Ability to spray graze weeds meaning lower chemical spend
- Knocking down chaff piles so they can be seeded through
- Grazing chaff lines so they break down more quickly, and
- Recycling nutrients to benefit the following crop.

Although sheep cause some compaction while grazing on stubbles, it is shallow and transient and usually disappears after the soil wets again. Reduced water infiltration and yield from grazing is due to the removal of cover rather than compaction; light grazing has no impact on subsequent grain yields. **E**

MORE INFORMATION

Download the *Grazing modern stubbles* guide at www.wool.com/stubbles



BLOWFLY INSECTICIDE RESISTANCE

RESEARCH RESULTS AND ADVICE FOR WOOLGROWERS

KEY POINTS

- Results from a recently completed collaborative AWI project with the NSW Department of Primary Industries (NSW DPI) demonstrated that the number of samples found to be dicyclanil or cyromazine resistant had increased from the survey last done in 2013.
- If woolgrowers already have resistance on their property, this could result in shorter periods of protection than what they could normally expect, rather than a complete loss of effectiveness.
- With the warm summer months upon us, the risk of flystrike is increased, so it is more critical than ever that all woolgrowers continue to closely monitor their flocks and consider modifying their flystrike management program if they have outbreaks that are difficult to manage and control.

With woolgrowers relying less on mulesing for flystrike control, it is increasingly important for them to achieve good results from chemical treatments. This requires strict adherence to label instructions to ensure the correct dose rate is used, application equipment is working properly, and flystrike control products are carefully applied to all at-risk sheep.

Flystrike control products are carefully tested for efficacy and to justify label claims before they are registered. If treatments are applied strictly according to the label instructions, all products should give the protection periods listed on the label. However, there is one 'fly in the ointment': the occurrence of resistance in sheep blowfly populations.

There is a long history of resistance to flystrike control chemicals, including organochlorine compounds, organophosphates, carbamates and to benzoyl phenyl urea growth regulators. Long term use and over reliance on a particular chemical group for any type of pest control almost inevitably results in resistance if good resistance management programs

aren't put in place. In the case of sheep blowflies, resistance results in reduced periods of protection from preventative treatments and, in the case of flystrike treatment products, reduced efficacy in killing maggots.

While there are several different flystrike treatments available, an AWI-funded survey in 2019 of woolgrower parasite control practices showed that 64% of respondents nationally used flystrike treatments containing either cyromazine or dicyclanil.

Of Merino producers, 7.2% expressed concerns that some products may not be working as well as previously thought, with the highest concerns in Central NSW where 11.3% suspected the presence of resistance. In addition, a previous study as far back as 2001 indicated the existence of low-level resistance to cyromazine in a number of flocks.

A more recent study of resistance (completed in 2020) has been carried out by AWI in partnership with NSW DPI. Woolgrowers from throughout Australia were asked to send samples of maggots collected from struck sheep to the NSW DPI Elizabeth

Table 1: Survey samples and results: cyromazine or dicyclanil

STATE	SAMPLES TESTED	% SUSCEPTIBLE	% RESISTANT TO CYROMAZINE	% RESISTANT TO BOTH CYROMAZINE & DICYCLANIL
NSW	55	0	100	100
WA	21	24	76	28
SA	12	42	58	25
Vic	11	9	91	82
Tas	1	100	0	0
Overall	100	12	88	73

Macarthur Agricultural Institute for testing.

INSECTICIDE RESISTANCE SURVEY RESULTS

CYROMAZINE AND DICYCLANIL

Blowfly maggot samples were received from woolgrowers in most states and the majority of these samples came from properties with a history of either cyromazine or dicyclanil use. Of the submitted samples, 100 yielded live *Lucilia cuprina* flies that provided viable larvae for resistance testing.

The results from the resistance survey (see Table 1) suggested a high prevalence of dicyclanil (and cyromazine) resistance in NSW, with all strains tested resistant to both dicyclanil and cyromazine, and no susceptible strains were found. There was also a relatively high level of resistance in Victoria although one susceptible strain and one strain with resistance to cyromazine, but not to dicyclanil, was found. Dicyclanil-resistant strains were also found in both WA and SA, but at lower percentages than in the two eastern states (28%, n=6 for WA and 25%, n=3 for SA) and there were a number of strains with resistance to cyromazine, but not to dicyclanil (76%, n=16 for WA and 58%, n=7 for SA). Only one strain from Tasmania was tested and no samples were received from Queensland, possibly as a result of the dry conditions.

It should be noted that these were not a random selection of strains. Therefore, the results should not be interpreted as an estimate of the prevalence of resistance. However, the study does seem to confirm

that although dicyclanil resistance was found in both WA and SA, it is more widespread in NSW and Victoria where there is a relatively higher and more consistent flystrike risk than the other states, and hence, higher historic use of these chemicals. It is also likely that there will be areas or flocks in both NSW and Victoria where there is relatively little resistance present.

Samples were also tested to determine if there had been changes in the other main flystrike control chemicals: diazinon, ivermectin, spinosad and imidacloprid.

DIAZINON

With diazinon, resistance in sheep blowflies has been well known for many years and has stabilised in the population. As organophosphates have now been withdrawn from use as preventative treatments, because of occupational health and safety concerns, any impact of resistance is probably minor and only on the efficacy of blowfly dressings in killing blowfly larvae.

IVERMECTIN AND SPINOSAD

With ivermectin and spinosad, results suggested that there was no functional fly resistance present to either chemical.

IMIDACLOPRID

With imidacloprid, results suggested a preliminary shift towards resistance in some flocks. This was most likely due to exposure of sheep blowflies to lice control treatments as imidacloprid has only relatively recently been registered for flystrike control and is not presently widely used in the industry for this purpose. There is no evidence at

this stage that there has been any effect on efficacy for flystrike control.

These results underline the importance of having a good resistance management plan in place for ALL chemical products and, in particular, where chemicals from the same chemical group are also used to control other parasites.

EFFECT OF RESISTANCE ON PERIODS OF PROTECTION FROM PREVENTATIVE TREATMENTS

To assess the effect of resistance on field protection, the researchers used an implant trial to test the length of protection against two field-derived strains, a cyromazine- and dicyclanil-susceptible strain and a dicyclanil- and cyromazine-resistant strain whose resistance level was maintained by laboratory selection with dicyclanil. Groups of six sheep were exposed to blowfly larvae under a "high fly pressure" scenario, after treatment with the following products:

- Three dicyclanil spray on products:
 - (a) 12.5 g/L dicyclanil, (CLiKZiN™ Spray-On)
 - (b) 50 g/L dicyclanil (CLiK™ Spray-On)
 - (c) 65 g/L dicyclanil (CLiKExtra™ Spray-On)
- A cyromazine jetting fluid: 500 g/L cyromazine (Vetrazin™ Liquid); and
- An ivermectin-based jetting fluid: 16.0 g/L ivermectin (Coopers Blowfly and Lice™)

These results (see Table 2) show that with the dicyclanil and cyromazine products, the protection periods against the susceptible strain larvae were at least equal to the label claims in all instances. However, the resistant strain protection periods were less than half the period of the label claims.

With the ivermectin-based product, although it appeared that there may have also been some reduction in the protection provided, resistance was not indicated in the resistance assays. As the implant trial represents relatively high fly pressure and the original

Table 2: Efficacy of protection

CHEMICAL	CONCENTRATION OF ACTIVE	APPLICATION METHOD	LABEL CLAIMED PERIOD OF PROTECTION	PERIOD OF PROTECTION	
				SUSCEPTIBLE LARVAE	RESISTANT LARVAE
Dicyclanil	12.5 g/L	Spray-on	Up to 11 weeks	>11 weeks	< 3 weeks
"	50 g/L	Spray-on	18-24 weeks	>25 weeks	< 4 weeks
"	65 g/L	Spray-on	Up to 29 weeks	>28 weeks	< 9 weeks
Cyromazine	500 g/L	Jetting	Up to 14 weeks	>15 weeks	< 7 weeks
Ivermectin	16.0 g/L	Jetting	Up to 12 weeks	>12 weeks	< 8 weeks
Control (no treatment)	Nil	N.A.	N.A.	0	0

CONTINUED FROM PREVIOUS PAGE

label claim was for up to twelve weeks under low to moderate fly pressure, this seems to indicate that the level of susceptibility to ivermectin has not changed significantly. However, the possibility of cross resistance with dicyclanil requires further investigation.

It should be noted that the method used for this study is a more severe challenge than likely in most field situations and provides something of a worst-case scenario. Firstly, the resistant strain comprised a strain of flies developed from the most resistant strains found in the survey. On most properties, even where some resistance already exists, the level of resistance is likely to be lower than in the flies used here. In addition, even though the larval implant method gave protection periods in accordance with label claims when the susceptible strain of flies was tested, larval implants could be considered a more severe test than generally experienced in the field.

EFFECT OF RESISTANCE ON FLYSTRIKE DRESSINGS

The study also tested the effect of dicyclanil resistance on the efficiency of flystrike treatment products. Whilst resistance produced a difference, it was not large. This was not surprising as even with susceptible strains of larvae, in most instances just applying a treatment product will not usually kill all maggots unless other measures such as shearing the wool away from the struck area and physically removing maggots are also used. **B**

MORE INFORMATION

The AWI/NSW DPI final project report is available at www.wool.com/flystrikelatest#research-management For managing insecticide resistance, refer to www.flyboss.com.au/sheep-goats/treatment/insecticide-resistance Resources available include:

- Resistance management strategy for the Australian sheep blowfly (4-page factsheet, April 2019)
- A Fly in the Ointment – an article about managing insecticide resistance in blowflies (updated November 2020).

It is vital that sheep producers prudently manage their use of flystrike insecticides, to maintain protection for their flocks and slow the development of resistance within their local fly populations.

HOW DOES THIS CHANGE MY BLOWFLY CONTROL PROGRAM?

“Not very much if you are following the resistance management rules,” said NSW DPI researcher, Narelle Sales. “If you have resistance on your property and you are applying the chemical correctly, this doesn’t mean that the products have totally lost effectiveness, it just means that the period of protection may be less than what you have previously expected – and the degree to which the protection period has been shortened may vary between properties.”

When shortened protection periods are noticed, often this is due to poor application or failure to follow label instructions, so the first thing is to check the label and check your application method.

“Resistance is not the end of the road for flystrike control, but it is important to recognise when it is present and manage your flystrike program accordingly.”

Narelle Sales, NSW DPI

However, it is more critical than ever to keep a close eye on your flocks, especially with the current Eastern Australian seasonal conditions and a predicted La Nina likely to produce ideal, warm, wet conditions for flies during the high-risk summer/early autumn period.

Close monitoring will allow you to detect strikes quickly if protection starts to break down earlier than expected. In situations where only a few sheep are becoming struck, it will be enough to treat individual strikes as they occur. In other cases,

particularly if it is only part way through the flystrike season, it may be necessary to apply an extra flock treatment.

Even on properties where there is currently no resistance, the resistance management rules are the same. Producers should follow the below eight-step insecticide resistance strategy (outlined in more detail on the opposite page), which was developed by AWI’s Sheep Blowfly Resistance Management Strategy Working Group:

1. Use an integrated approach to reduce reliance on insecticides.
2. Know your chemical groups.
3. Rotate chemical groups where practical.
4. Minimise the number of treatments applied in a season.
5. Consider treatments for other parasites, particularly lice treatments.
6. Apply insecticides carefully and strictly as specified on the label.
7. Monitor for flystrike frequently.
8. Collect and kill all maggots from flystruck sheep.

FLYSTRIKE RESISTANCE TESTING AVAILABLE

NSW DPI is currently offering sheep blowfly insecticide resistance testing to woolgrowers.

For details, contact Narelle Sales via email at narelle.sales@dpi.nsw.gov.au or phone (02) 4640 6446.



INSECTICIDE RESISTANCE STRATEGY TO MAXIMISE FLYSTRIKE CONTROL

1. USE AN INTEGRATED APPROACH TO REDUCE RELIANCE ON INSECTICIDES

- Breed for resistance to all types of flystrike: poll, pizzle, body and breech (breeding for polled animals; low wrinkle, cover, urine stain, dags; and white wool colour. Cull struck sheep).
- Shear or crutch at times that maximise protection against flystrike.
- Dock tails to the correct length.
- Manage sheep to minimise scouring.
- Use breech modification if required, until sheep are genetically resistant to flystrike.
- Use chemicals sparingly.
- Where the above approaches are insufficient, mules with pain relief.

2. KNOW YOUR CHEMICAL GROUPS

- Insecticides used for flystrike control fall into different groups or chemical families; see Table 3 below.
- Flies resistant to one insecticide in a particular chemical group are likely to be resistant to other insecticides in the same group.
- Different flystrike products may contain the same chemical or a related chemical from the same chemical group. When looking for alternatives, change to a different chemical group, don't just change insecticide brands.
- Use the FlyBoss Fly and Lice Products Tool at www.flyboss.com.au/tools/products.php to search for flystrike products, determine their chemical group and make your selection.

3. ROTATE CHEMICAL GROUPS WHERE PRACTICAL

Insecticide choice should be tailored to your particular location and management.

- Consider rotating insecticide products from different chemical groups to slow the development of resistance.
- Use a different chemical group for treating struck sheep to that used for flystrike prevention.
- Successive treatments within the fly season should generally be different chemical groups.
- Choose a product with the appropriate protection period and time of application.
 - A product that provides a shorter period of protection may be sufficient in some instances. For example, when sale of sheep or lambs for slaughter is imminent, when sheep are soon to be crutched or shorn, or when close monitoring of sheep is not possible for a short period because of other farm tasks or holidays.
 - The Flyboss Fly and Lice Products Tool can help you select a chemical group that will provide the length of protection that is required.

4. MINIMISE THE NUMBER OF INSECTICIDE TREATMENTS APPLIED IN A SEASON

- Optimise the timing of treatment to provide full protection during high risk periods.
- Utilise other management strategies, such as shearing and crutching, to minimise the length of time flies may be exposed to inadequate levels of insecticides on the sheep. However,

ensure that you abide by wool harvesting intervals so that there are no unacceptable chemical residues in the wool.

5. CONSIDER TREATMENTS FOR OTHER PARASITES, PARTICULARLY LICE TREATMENTS

- Exposure to insecticides used for treatment of other parasites (particularly lice) can contribute to resistance selection in blowflies, and vice versa.
- Where possible, use a different chemical group to treat flies and lice.
- Aim to eradicate lice and avoid the need for lice treatments.

6. APPLY INSECTICIDES CAREFULLY AND STRICTLY AS SPECIFIED ON THE LABEL

- Shorter protection periods are often due to poor application, not resistance. Be sure to apply insecticides carefully according to the label instructions.
- Poor application can expose flies to sub-lethal levels of insecticides; this can contribute to an increase in resistance.

7. MONITOR FOR FLYSTRIKE FREQUENTLY

- Check every 2–3 days during high risk periods to identify struck sheep early.
- Treat sheep and kill maggots before they become larger and are harder to kill.
- Record when strike occurs in relation to preventive treatments.
- Notify the product manufacturer if you suspect resistance.

8. COLLECT AND KILL ALL MAGGOTS FROM FLY STRUCK SHEEP

- Place maggots and shorn wool into a sealed plastic bag and leave in the sun so the maggots are killed.
- If maggots are not collected or destroyed the most resistant ones can burrow into the soil, complete development and contribute to the next generation of flies.

Table 3. Chemical groups and actives available for flystrike control and their application methods

CHEMICAL GROUP	CHEMICAL ACTIVE	APPLICATION METHOD ¹			
		Spray-on	Jetting	Dipping	Dressing
Insect Growth Regulator (IGR)	Cyromazine	Yes	Yes	Yes	Yes
	Dicyclanil	Yes	No	No	No
Neonicotinoid	Imidacloprid	Yes	No	No	No
Spinosyn	Spinosad	No	Yes	No	Yes
Macrocyclic Lactone (ML)	Ivermectin	No	Yes	No	Yes
Synthetic Pyrethroid (SP)	Alpha-cypermethrin ²	Yes	No	No	No
Organophosphate (OP)	Diazinon, Propetamphos & Chlorfenvinphos	No	No	No	Yes

¹ Always follow label directions

² Registered for prevention of body strike only

FLYSTRIKE PREVENTION

PUBLICATIONS

www.wool.com/flystrikelatest

AWI makes available publications about flystrike prevention on its website at www.wool.com/flystrikelatest

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-mulesed enterprise.



MANAGING BREECH FLYSTRIKE

(June 2017)

This 44-page manual is designed to help woolgrowers further reduce their flock's flystrike risk. It includes coverage of management options, breech modification, scouring and worm control, breeding for breech strike resistance and moving to a non mulesed enterprise.



DEALING WITH DAGS MANUAL AND FACTSHEET

(August 2019)

This 44-page manual for advisors, and 2-page summary factsheet for woolgrowers, review the causes, diagnosis, management and treatment of dags and provides a guide to manage and prevent scouring and dag formation.



ANAESTHETICS AND ANALGESICS AT LAMB MARKING

(August 2020)

3-page fact sheet.

ANAESTHETICS AND ANALGESICS

(December 2019)

4-page summary article from *Beyond the Bale*.



AWI'S BREECH FLYSTRIKE RD&E TECHNICAL UPDATES

(May 2020)

Project summaries from AWI's Flystrike R&D Technical Updates events: 2020, 2018, 2016, 2014, 2012 and 2010.



LAMB MARKING TRAINING GUIDE

(June 2020)

This 80-page training guide will help you plan, prepare and conduct best welfare practice lamb marking procedures.

BIOSECURITY EXCELLENCE AT KIA ORA MERINO

Woolgrower Brendan Finnigan of 'Kia Ora Merino' at Winslow in Victoria was announced in November as Farm Biosecurity Producer of the Year for outstanding on-farm biosecurity practices that help protect his family's farm from emergency diseases and pests.

Minister for Agriculture, Drought and Emergency Management, David Littleproud, said the annual Australian Biosecurity Awards are an important recognition of those making vital contributions to protecting Australia's enviable biosecurity status.

"Biosecurity is a shared responsibility. Government, industry and the community all have an essential role to play in safeguarding Australia from biosecurity risks. Through the Australian Biosecurity Awards, we are shining a light on our biosecurity champions to recognise the businesses and individuals who support and promote Australia's biosecurity," he said.

Announced as Farm Biosecurity Producer of the Year, dedicated superfine Merino woolgrower Brendan Finnigan of Kia Ora



Brendan Finnigan with his wife Susan, son James and daughter-in-law Nicole, and grandchildren Olivia, Jim and Madison at Kia Ora.

Merino – along with his family members Susan, James and Nicole Finnigan – are leaders in, and strong advocates for, on-farm biosecurity and best practice livestock and farm management.

They have combined the Biocheck® Biosecurity Plan – originally developed by Warrnambool veterinarian Dr David Beggs – with all their farm management processes and procedures, which results in biosecurity on their property being not just a plan in the office but everyday practice.

The Finnigan family has strong biosecurity documentation practices and high standards for nutrition, cleanliness, health and disease prevention. Kia Ora Merino also uses the AWEX WoolClip app, which is used in conjunction with the addition of QR/RFID tracking on each wool bale. This means tracking is possible from farm to product, adding a new level of biosecurity and provenance to the wool.

Kia Ora Merino does not have footrot, lice or drench resistance. To maintain this status, strict rules are applied, such as:

- never returning sheep to the flock if they leave the property
- well-maintained boundary fences
- fencing off rivers within property boundaries.

To reduce the risk of introducing new diseases, Kia Ora Merino has a self-replacing flock and uses artificial insemination to purchase outside genetics. The few purchased stock undergo quarantine drenching, inspection, vaccination and other measures before being quarantined in a separate paddock for 21 days.

Equipment is kept on the property to avoid contamination. Visitors must follow biosecurity signage and be entered into the visitor logbook. Visitor vehicles are directed to specific parking locations and visitors use farm vehicles on the property. Kia Ora Merino shears 10,000 sheep annually and so to stop lice coming in from other sheds, moccasins are provided to shearers and hand pieces are cleaned and sprayed with insecticide.

As well as protecting their property from unwanted pests and diseases, the Finnigans' biosecurity management provides security to their customers and underpins the quality of the environment.

If the COVID-19 pandemic has taught Australians anything, it is that maintaining good biosecurity practices to minimise the spread of disease is essential in our everyday lives. These same practices are just as important for the health and safety of your livestock. **E**

MORE INFORMATION
www.farmbiosecurity.com.au

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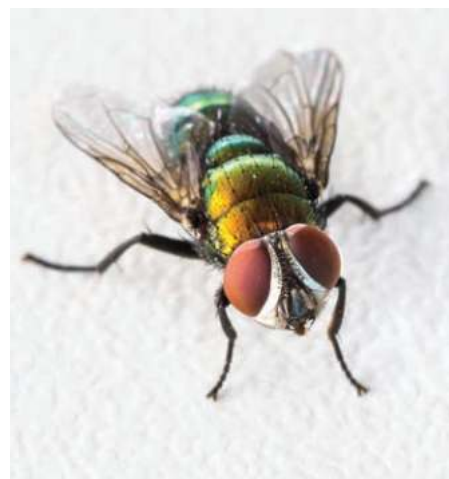
Flystrike researchers are again seeking woolgrowers' help this season in sourcing maggot samples from across Australia. The maggots will be used to examine the genetic differences between blowflies from different regions of the country.

KEY POINTS

- Research into the genetic variation within the Australian sheep blowfly *Lucilia cuprina* could help in prolonging the effectiveness of flystrike insecticides and assist the development of a vaccine for effective and sustainable flystrike control.
- Researchers are seeking samples of maggots during the current flystrike season (late 2020 and early 2021), especially from SA, eastern WA, northern NSW and southern Qld.
- An analysis of blowfly samples collected from previous seasons indicated a high level of blowfly migration within and between Vic, SA and NSW, but identified significant genetic differences between the blowfly populations of Tas, WA, Qld and those from Vic/SA/NSW.
- Researchers identified a high proportion of *Lucilia sericata* (common green bottle fly) compared to *Lucilia cuprina* on some Tasmanian properties and will take a closer look at the importance of this fly in causing flystrike.

An ongoing project with the University of Melbourne (UOM), funded by AWI, is analysing regional genetic differences in Australian sheep blowfly DNA. The project is already providing insights into how blowflies move between sheep-growing regions.

Improved understanding of blowfly genetic differences and their behaviour will inform chemical treatment and resistance



management strategies, potentially prolonging the effectiveness of insecticides currently in use for blowfly control. The project's findings are also contributing to work by CSIRO and UOM to develop a potential flystrike vaccine.

INSECTICIDE RESISTANCE

Using their understanding of the blowfly (*Lucilia cuprina*) genome in conjunction with data previously collected from field survey samples of sheep blowflies, the UOM researchers have compiled a 'blowfly resistance database'. The database features blowfly genes which are known to be associated with resistance mechanisms for several insecticide classes used for both prevention of flystrike or as a wound treatment. By searching through the genetic code of the fly, the researchers are trying to identify mutations that might enable flies to resist insecticide treatments.

"The focus of the project this year will be on maggots recovered from struck sheep and so will contribute significantly to the insecticide resistance research," said Dr Trent Perry, one of the UOM research team leaders. "The greater the number of samples received for analysis, the more likely it will be that we will be able to detect mutations that might lead to resistance issues emerging in the future."

An analysis of blowfly samples received from Vic, SA and southern NSW last season indicated a high level of blowfly migration within and between these regions of Australia, suggesting that they may be able to be treated

as a single population. The researchers also identified significant genetic differences between the blowfly populations of Tas, WA, Qld and the Vic/SA/NSW blowfly population.

Analysis of samples collected in the current season, during late 2020 and early 2021, should provide a better picture of these differences between blowfly populations and allow the researchers to more clearly establish the patterns of blowfly migration between different regions.

The results from this research will deliver important insights into how insecticide resistance may spread within and between sheep blowfly populations, providing valuable information to enhance area-wide resistance management plans for controlling outbreaks of insecticide resistance.

LUCILIA SERICATA

Blowfly sample collections from Tasmania have compelled the researchers to take a closer look at a closely related species of the Australian sheep blowfly, *Lucilia sericata* (the common green bottle fly).

While *L. sericata* is also known to cause flystrike and is the major sheep blowfly in many other countries, it has been reported to be a less common cause of flystrike in Australia compared to *L. cuprina*.

An analysis of samples collected in the first year of the project identified a high proportion of *L. sericata* relative to *L. cuprina* flies on some Tasmanian properties. After incorporating this genetic data into their

analysis, the researchers discovered that there may be a low level of interbreeding occurring between these two fly species.

Further investigations will determine the importance of *L. sericata* as a cause of flystrike in Australia and what impact this might have on the development of insecticide resistance and for research into the flystrike vaccine.

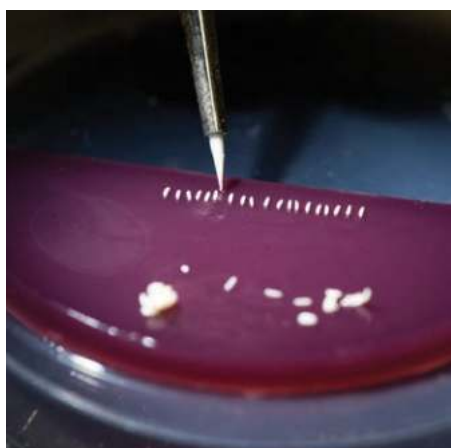
VACCINE DEVELOPMENT

Another core component of this AWI-funded project is to gain a more detailed insight into the factors that allow the maggots to parasitise and survive on live sheep. The researchers have been working to understand what the key proteins are that enable the sheep blowfly to be highly successful at initiating a strike but also avoid rejection by the host (sheep) immune defences.

This research, integrated with their improved understanding of the genomic differences in the blowfly between regions, is expected to also inform the development of a vaccine to protect sheep against flystrike. It will ensure that only those proteins that are found in all the sheep blowfly populations across the country are selected as potential vaccine candidates.

"If a vaccine is successfully developed, this research will enable us to be confident that it will be effective against flystrike in sheep from all regions of Australia," said Associate Professor Vern Bowles of UOM.

Dr Clare Anstead examining young blowfly maggots in her laboratory at the University of Melbourne.



WE WANT YOUR MAGGOTS!



As part of the final year of this AWI-funded project, University of Melbourne researchers are seeking woolgrowers

from across Australia who are willing to collect blowfly maggots on their property for use in their research.

A critical element of this research project is obtaining a wide-ranging set of blowfly population samples, ensuring researchers capture as much of the genetic variation present in Australian sheep blowfly populations as possible. Blowfly collections during the fly seasons of early 2019 and 2019/20 are already providing very useful genetic information.

"We are now gearing up for the final maggot collection of 2020/21 and are keen to ensure we receive a broad



Locations from which maggot samples have been provided in previous years to researchers.

range of samples from different regions," said Dr Clare Anstead of UOM.

"Whilst we are keen to receive more maggots from locations that have already provided samples (see the red and blue dots in the map), we would particularly love samples from South Australia, eastern WA, northern NSW and southern Queensland, as they are unrepresented in our database."

MAGGOT COLLECTION PROCESS

The University of Melbourne has collection kits ready to send to woolgrowers. After you have received the kit, if you then get a struck sheep all you need to do is simply:

- 1. Collect maggots from a struck sheep into one empty tube.** Preferably maggots from only one sheep per tube. If you are having significant fly problems this season, you can be sent more tubes. Fill in the form with collection details.
- 2. Fill tube containing maggot sample with the provided liquid buffer and screw sample tube lid**

on tightly to prevent leaks.

If you are not able to post back within a few days of collection, store in a fridge or cool place.

- 3. Post samples back to us in the reply-paid envelope.** If you have collected multiple samples at a time, these can be posted back in the same envelope.

For more information or to request a blowfly maggot collection kit, contact the University's Blowfly Collection Team at:

blowfly-collection@unimelb.edu.au
or (03) 8344 2362



Researchers from the University of Melbourne's Blowfly Collection Team are grateful for woolgrowers' support in supplying their maggots for the project. Pictured in order are Associate Professor Vern Bowles, Dr Clare Anstead, Kon Eliades, Dr Shilpa Kapoor, Dr Trent Perry and Tinna Yang.

PARABOSS

YOUR GO-TO SITE FOR SHEEP PARASITE CONTROL

ParaBoss is a suite of three products – WormBoss, FlyBoss and LiceBoss – developed to help sheep producers in the management of worms, blowflies and lice. The websites are a key source of detailed management information and regional programs that have been developed by expert panels of parasitologists and veterinarians from across Australia.

ParaBoss is available at www.paraboss.com.au and provides access to the three websites WormBoss, FlyBoss and LiceBoss.



paraboss

Parasite management affects all woolgrowers, with parasite prevention, control and lost production costing the industry hundreds of millions of dollars a year. Actions taken to minimise parasite risks and treat affected sheep can vary significantly across the country, and the timing of these actions is crucial to ensuring that they are effective.

With sheep being raised across Australia, in a number of different environments and climates, there can be no 'one-size-fits-all' approach to parasite management. Even year-on-year seasonal variations, such as extreme rainfall and temperature fluctuations, can mean that a property

needs to change their approach.

When applied incorrectly, however, preventative and control measures can have a long-lasting negative effect not only on the property in question, but throughout the wider industry. Especially where chemical treatments are concerned, improper use and poor technique can result in ongoing parasite problems, negatively impact animal welfare, and contribute to the development of chemical resistance in parasite populations.

To combat these issues, it is imperative that woolgrowers have access to accurate information that guides their approach to parasite management on their own property. ParaBoss is a one-stop shop to support woolgrowers in the prevention and treatment of parasite risks for sheep, and the ParaBoss website has been developed to house three digital tools for each major parasite risk.

Comprised of the WormBoss, FlyBoss and LiceBoss websites, ParaBoss provides woolgrowers with tools, recommendations and resources for parasite management, no matter where they are located across Australia or what their current parasite strategies look like. Information is accessible as webpages, articles, reference documents and multimedia, so woolgrowers can select the format which suits them best.

INFORMATION & DECISION SUPPORT TOOLS

Alongside a comprehensive suite of information detailing the key parasite risks, preventative strategies and treatment options, woolgrowers can find decision support tools which can help them to assess their situation and make an informed choice on how to proceed.



wormboss

WormBoss includes methods to test for worm burdens and assess the effectiveness of a drench to look for signs of developing drench resistance.

This is complemented by strategies to minimise the reliance on chemical treatments, such as breeding for worm resistance, improving nutrition to boost immunity, and managing grazing pastures in order to limit exposure to worm larvae.

Regionally developed recommendations are provided by the various WormBoss worm control programs available for each WormBoss region; these are tailored to local climate conditions, ensuring woolgrowers receive accurate practical information relevant to their situation.



WormBoss Worm Control Program Regions:

For each region there is a separate worm control program that includes practical and regionally-specific strategies on grazing management, breeding for worm resistance, when to drench and when to WormTest, and managing drench resistance.

flyboss

On FlyBoss, woolgrowers can explore the various options for managing flystrike risk, including breeding for flystrike resistance, breech and tail modification, and timing of shearing and crutching.

Information on best practice use of preventative chemical treatments to maximise their effectiveness and minimise the risk of developing chemical resistance is also available.

Available tools include the Flystrike Risk Simulator, which enables woolgrowers to enter their location, sheep type and flystrike management practices to estimate their risk of flystrike based on local weather data. Woolgrowers can then adjust the different flystrike treatment and prevention practices to predict their impact. The results can be used by woolgrowers, and their advisors, to inform the development of an effective flystrike management plan specific to their property and sheep type.

liceboss

For LiceBoss, advice includes proper technique for monitoring for lice, determining the cause of rubbing, selecting appropriate treatments and application methods, and assessing the impacts of treatment regimes.

This is strengthened by resources for implementing biosecurity procedures to ensure that, once dealt with, lice infestations do not return to the property.

BEST PRACTICE

Collectively, the three Boss websites 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.

ParaBoss also contributes to the **professional development of farm advisers**, such as vets and rural resellers, through hosting ongoing technical workshops and conferences to ensure they have a contemporary understanding of sheep parasite management and can provide more effective services to their clients. From 2021, this will also include the Sheep Parasite Management Certificate, giving farm advisers the opportunity to be recognised as a source of current and comprehensive parasite management knowledge.

To ensure producers have access to service providers who can provide the best possible results, ParaBoss also operates the **Worm Egg Count Quality Assurance (WEC QA) Program**. This program allows worm egg count (WEC) providers to test the accuracy of their work and receive recognition for accurate services, and provides WEC users with a list of endorsed service providers. Inaccurate worm egg counts can result in woolgrowers missing the optimum drench time: too late and there will be lost productivity and animal welfare impacts; too early and drenching costs are not justified.

For woolgrowers wondering what actions are most needed and when, the collective ParaBoss tools are accompanied by a free, **twice-monthly newsletter** which discusses the current state of sheep parasites nationally, explores issues most pressing on-farm, and provides an update on timely and effective management strategies. Sign up to receive newsletters and tap into the expertise of the ParaBoss network at www.paraboss.com.au/subscriptions.

Join **ParaBoss on Facebook** at www.facebook.com/paraboss.com.au to see weekly posts on flystrike, lice and worm control.

ParaBoss is funded by AWI and MLA and coordinated by the University of New England with industry oversight. **B**

MORE INFORMATION

ParaBoss provides access to the three websites at www.paraboss.com.au.



AWI SHEEP CLASSING WORKSHOPS



A spectacular South Australian backdrop to the sheep classing workshop held at Tom, Angus and Matt Ashby's property 'North Ashrose' at Gulnare in October. AWI's sheep industry specialist Stuart Hodgson is explaining the practical skills involved in sheep classing.



The sheep classing workshop at Ross and Penny King's 'Waterloo Station' east of Walcha in NSW in July.

AWI's hands-on sheep classing workshops resumed in July on properties across eastern Australia, following the easing of restrictions related to COVID-19. The workshops are aimed at helping woolgrowers in their sheep selection and breeding programs to increase the productivity of Merinos.

AWI regularly runs one-day sheep classing workshops, for people of all ages and enterprises, that are a practical way to learn about increasing the production of their Merino flocks.

Through a combination of theory and hands-on components, AWI's Stuart Hodgson leads the workshop and takes commercial producers through the process of classing sheep, including understanding the type of sheep that breeders are aiming for, comparing individual traits between sheep, and other sources of information.

During the first six months of the 2019/20 financial year, sheep classing workshops were held 16 times in NSW (5), Victoria (5), Qld (3) and SA (3). They were attended by more than 250 woolgrowers from all kinds of Merino wool-growing enterprises.

Due to restrictions related to COVID-19, many others that were to be held in the latter six months of the financial year had to be cancelled. However, the workshops have now resumed in eastern Australia, with 12 workshops held in the four months from July to October: NSW (7), Victoria (2), SA (3). More than 150 woolgrowers have attended these recent workshops.

AWI's sheep industry specialist, Stuart Hodgson, is a highly experienced sheep classer and former Merino stud stock agent, who has been running sheep classing workshops for AWI for the past five years. Stuart says it's been great to get back on the road and have the sheep classing workshops under way again.

"We endeavour to attract to the workshops as many young growers from commercial sheep backgrounds as we can, highlighting

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SHEEP SELECTION TOOLS BOOKLET

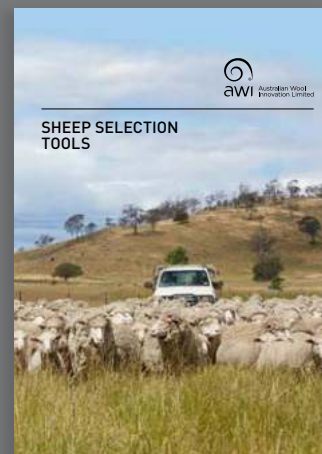
AWI's 20-page *Sheep Selection Tools* booklet, produced in 2017, provides a summary of a wide range of industry tools available for woolgrowers to help achieve their breeding goals, along with the strengths of each approach, and what is needed to incorporate these approaches into a commercial or ram breeding situation.

Topics covered are sheep shows, wether trials, flock ewe competitions, Merino Sire Evaluation (and the Merino Lifetime Productivity project), MERINOSELECT, Visual Sheep Scores, RamSelect, workshops, sheep classers and advisors, and saleyards.

The booklet provides an ideal introduction for new entrants to the industry; late secondary school, university and TAFE students; as well as other woolgrowers who would like a recap on all the tools now available. **E**

MORE INFORMATION

Download the booklet from www.wool.com/genetic-tools or request a free hard copy from the **AWI Helpline on 1800 070 099**.



the benefits of self-replacing Merino sheep enterprises," Stuart said.

"The aim of the workshops is to help woolgrowers become better and more confident when classing their sheep. The workshops are open to anyone in the industry, but it is especially useful for younger people in the industry to get some hands-on, practical advice.

"During the day, we look at visually assessing the sheep and identifying the good and bad traits, and identifying those sheep that should be retained or culled to best meet a breeding objective. It's important that woolgrowers have a balance in their

breeding program though and not focus too much on one trait.

"There are many tools now in the industry to help woolgrowers; while objective assessment is useful, we also need people to be able to do hands-on assessments.

"By using the tools available, woolgrowers can produce an animal that meets their business requirements. These animals need to be productive and profitable for their environmental conditions and able to compete with alternative enterprises."

The workshops also provide participants with the opportunity to talk to other sheep

producers about their breeding objectives, and compare each other's thoughts on the sheep they are examining at the workshop.

At the workshops, AWI's National Events Manager, Wendie Ridgley, also discusses with attendees the role AWI plays in the promotion of our wool industry and answers their questions on industry issues. Wendie also encourages grower groups to explore the possibilities of starting up local ewe hogget competitions with the help of AWI resources.

AWI thanks the many woolgrowers that have hosted the workshops. **E**

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WETHER TRIALS

UPDATE 2020 AND REVIEW

FAST FACTS

- Wether trials continue to highlight large team differences in per head wool and meat income.
- Importantly, wether trials have kept a focus on adult age productivity.
- The number of wether trials have reduced in recent times and now almost exclusively are conducted in NSW.
- New technology such as DNA Flock Profiling has used wether trial data as part of the validation process.

Wether trials have been an important genetic benchmarking tool in recent decades. Their key achievements have been to:

- provide commercial breeders with a genetic benchmarking tool
- the value of repeat adult and lifetime fleece value assessments
- promote high fleece weight for micron and high growth bloodlines
- increase the data for a range of bloodlines on their staple length, strength and wrinkle
- provide information to MERINOSELECT so that a new member's ewe base could be better allocated to the right genetic grouping strategy within the analysis; and
- more recently, add value and validation of genomic flock benchmarking (DNA Flock Profiling).

Wether trials continue to show the large variance in profitability between bloodlines. The top teams are often \$20 per head above the mean and the bottom teams are \$20 per head below the mean, most of which flows straight through to the profit line. In figure 1 above, Teams A and B have the same meat value, but team A is \$15 per head ahead on wool value. Wether trials have overwhelmingly shown the value in genetic benchmarking and selecting for traits that drive profit.

Currently there are six wether trials being conducted in NSW – at Glen Innes; Bathurst; Australian National Field Days, Orange; Bookham; Parkes; and the Peter Westblade Trial Wagga Wagga – although the recent drought has impacted on some of these sites. Currently the Peter Westblade trial for 2021-2023 is looking for teams to enter in early 2021 – contact craigwilsonlivestock@bigpond.com.

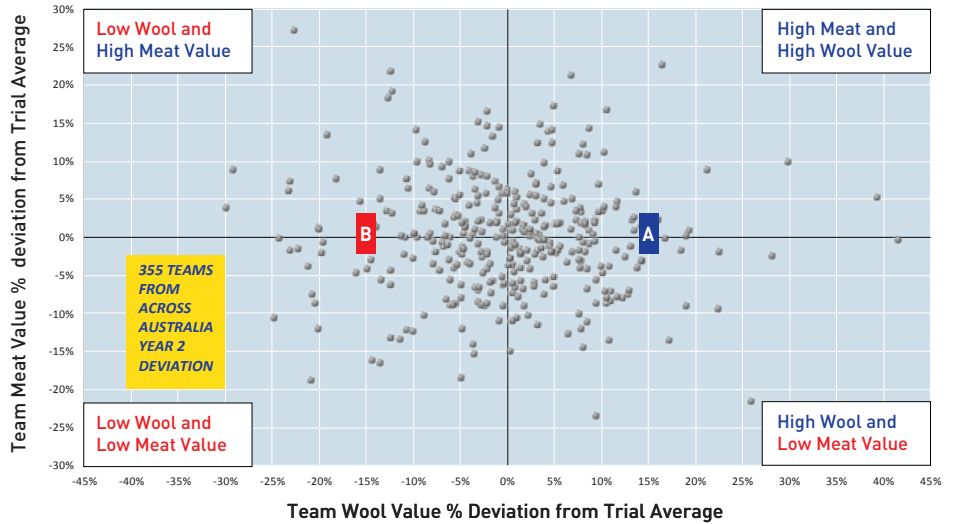


Figure 1. Per head variation from the mean for meat and wool value of 355 wether teams entered into the Peter Westblade Memorial Merino Challenge wether trials from 2004 to 2020. Source: Craig Wilson and Associates

Individual site reports for these six trials (plus Elmore Field Day Ewe Trial 2015-2019) can be found on the AWI website at www.wool.com/genetic-tools.

The most recent combined across wether trial analysis was conducted in 2018 and can be found on the NSW DPI website at www.merinobloodlines.com.au.

WHERE TO FROM HERE FOR WETHER TRIALS?

The number of wether trials, number of teams and number of new bloodlines have been falling over time and have receded back to NSW sites only – see Table 1 below. A review is being conducted into the merit and value of future combined analysis of wether trials.

- How best can the continuing trials be supported?

- Should further combined analysis take place; how many trials will there be in the future, what is the strength of the link teams and the impact of the increasing number of mixed bloodline teams?
- Has the new technology of DNA Flock Profiling reduced the value of the combined analysis?
- Can Sheep Genetics publish drop ASBV averages of MERINOSELECT members, and will DNA Flock Profiling replace the combined wether trial analysis or add to it?

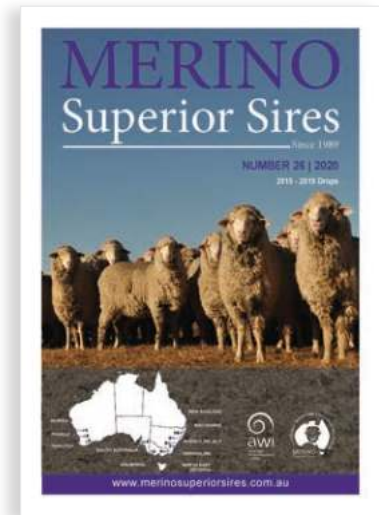
If you have any feedback, please contact AWI Program Manager Genetics and Animal Welfare Advocacy, Geoff Lindon, at geoff.lindon@wool.com. A report on the review will be included in a future edition of *Beyond the Bale*. **B**

Table 1. Merino Bloodline Performance combined analysis of wether trials in recent years

COMBINED ANALYSIS PUBLISHED	2007	2010	2014	2016	2018
Years in Analysis	1996-2006	1999-2010	2004-2014	2006-2016	2007-2018
Total number of Trials	63	57	23	25	25
NSW	21	24	17	23	24
WA	32	27	1		
Other	10	6	5	2	1
Total number of Trials	137	145	71	77	73
High Accuracy Bloodlines	46	53	1	9	46
Medium Accuracy Bloodlines	91	92	70	68	27
New Bloodlines	74	65	4	20	8

MERINO SUPERIOR SIRES 2020

The 2020 Merino Superior Sires No 26 publication has been published by the Australian Merino Sire Evaluation Association (AMSEA) reporting the results of the 350+ sires entered in Merino Sire Evaluation between 2015 and 2019. Results include MERINOSELECT ASBVs for both wool and carcase traits, alongside widely used indexes. These results add to the within-site classing, visual and measured results reported by trial sites on the Merino Superior Sires website.



Merino Superior Sires No.26 was released in October and is available, along with other Merino Sire Evaluation program information, at www.merinosuperiorsires.com.au



The crowd at Balmoral's 2020 Field Day. PHOTO: Balmoral Breeders.

Merino Superior Sires reports Australian Sheep Breeding Values (ASBVs) for each sire for a range of measured traits including, clean fleece weight, fibre diameter, staple strength, body weight, eye muscle depth, fat depth, plus worm egg count. Breeding Values are also included for the visual trait of early breech wrinkle and the percentages of progeny classed as Tops and Culls. Three standard industry indexes are reported, DP+, MP+ and FP+, plus the index developed specifically for AMSEA, WP+ (Wool Production Plus).

The Top 50 sires are also reported in Merino Superior Sires for each index, along with individual trait ASBVs, Classer Grade and

Poll/Horn status. In addition, an online version reports the All Time Top 50 sires for these indexes and, for the first time, a report outlining industry's high use sires will be available online. Merino Superior Sires is available for download, as are the corresponding within-site Merino Sire Evaluation reports, at www.merinosuperiorsires.com.au.

Merino Sire Evaluation takes sire nominations from any ram breeder or purchaser (with breeder permission) for entry at trial sites across Australia. Sire Evaluation provides benchmarking against other leading industry sires by providing the same ewes, and then the same management and

environment for their progeny at each site.

Entry enables:

- benchmarking of a sire's genetics against the best in the industry
- assessment at older stages such as hogget and adult
- creation or improvement of flock linkage with MERINOSELECT
- promotion of semen, stud ram and flock ram sales.

Entered sires are joined via artificial insemination with the resulting progeny evaluated for a range of traits relative to the progeny of other entered sires. All progeny are visually classed, measured and assessed without sire identification by independent, specialised operators for a wide range of traits including wool, carcase, breech conformation and parasite resistance.

A site field day enables inspection of the sire progeny groups alongside their current results. Sire results are reported at the site level as within flock breeding values (FBVs) as well as in Merino Superior Sires and via MERINOSELECT as ASBVs. The publication of ASBVs is made possible by using strong link sires at each site that allow the direct comparison of sires across all sites and years. **B**

MORE INFORMATION

- **Download** Merino Superior Sires #26 and within-site reports at www.merinosuperiorsires.com.au
- **Nominate** a sire for entry in AMSEA's Sire Evaluation program by emailing merinosireevaluation@bcsagribusiness.com.au
- **Subscribe** to trial results and upcoming field day notices via www.bit.ly/AMSEA_Subscription

NEW ENGLAND MLP ONLINE FIELD DAY



The recent New England Field Day was converted from an in-person, on-site experience to an online event featuring the 2018 drop and 2017 drop MLP ewes. A launch webinar and website showcasing sire progeny inspection videos and results, along with a site seasonal overview and associated MLP and New England research updates, will now be available online for the life of the MLP project.

FAST FACTS

The AWI-funded MLP project is a \$8 million (plus \$5 million from partners), 10-year partnership between AWI, the Australian Merino Sire Evaluation Association (AMSEA), nominating stud Merino breeders and five 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 assessment 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.



New England's Online Field Day sire group inspection page, listing the sire group details, wool shots and videos of the ewes from all angles.



With limited site access resulting from COVID-19 restrictions, the online field day at www.merinosuperiorsires.com.au/newenglandfieldday was produced by the CSIRO team at Chiswick's MLP site along with AWI, AMSEA and the New England Merino Sire Evaluation Association (NEMSEA). The launch webinar was hosted by SheepConnect NSW with attendees from across all Australian states.

The usual components of an MLP field day were presented in the webinar and are incorporated into the website. Interstate webinar and website attendees have been especially appreciative of the opportunity to access the event when usually distance would prevent them attending an onsite field day.

Of special interest on the website are the

inspection videos of the MLP ewes who were filmed in their sire progeny groups with an introduction to the sire, a classer comment from Angus Carter and their current results. Footage from nearly every angle is available of the ewes.

Visitors to the website are also able to view the webinar recording, watch the videos, download the results report, and view CSIRO's presentations on the related projects being undertaken at 'Chiswick'. Wool photos have been added for each sire group displaying a sample of each sire group's wool type.

The online resource will remain available for repeat industry visits as well as for educational opportunities.

MORE INFORMATION
www.merinosuperiorsires.com.au/newenglandfieldday

UNRAVELING REPRODUCTION ACROSS THE MLP PROJECT

Reproduction is being closely assessed in each year of the MLP project with all five sites collecting F1 ewe data about their reproductive functionality, joining and scanning results plus weaning information for their lambs. Ewes will be assessed annually to unravel reproduction results and trends right across their lifetime. 2020 has been a year of impressive reproduction data across all five MLP sites.

The annual lambing cycle has been completed for the MLP sites in 2020 with just the New England site yet to wean. The general return to favourable seasonal conditions has provided optimal conditions for joining of the MLP ewes followed by solid lambing results. A summary of preliminary reproduction results is provided in the table below.

These 2020 reproduction cycles bring the MLP project tally to 23 lambings completed of the planned total of 45. Reproduction traits are less heritable, and therefore more influenced by environmental conditions, so collecting high numbers of reproduction data points is necessary to tease out accurate genetic differences.

With 45 lambings planned there will be approximately 27,500 F2 lambs produced! These lambs will each have a DNA parentage test undertaken plus a weaning weight collected. Some sites are additionally collecting birthing records and visual breech scores; a significant commitment of resources by individual sites who will each have up to 5,000+ F2 lambs to lamb down, wean and collect data on.

All data collected to date has been submitted to the Sheep Genetics MERINOSELECT database and is one of the key datasets contributing to the reproduction genomic reference population. The Animal Genetics and Breeding Unit have subsequently been able to use the MERINOSELECT database to develop research breeding values for the component reproduction traits of Conception, Litter Size, Ewe Rearing Ability from the resulting Number of Lambs Weaned.

Data collected is also providing confirmation and insights into reproduction:

- Using raw data, sire performance can vary significantly from one year to the next
- There are sire and joining details that confirm certain sires within a joining syndicate are dominant each year.

As the MLP project proceeds, there are special interest topics value-adding to the project. These include a focus on ram mating success at both the Balmoral and Macquarie sites to look at whether close physical assessment of rams prior to joining, along with laboratory-based semen assessment correlates to better joining results. This

additional information will complement the core reproduction results.

At project completion, with a full reproduction dataset, the MLP project will look at overall reproduction trends with the view to answering further detailed questions about reproduction including:

- What's the ultimate culling strategy to improve reproduction and profit?
- What impact does reproduction performance have on fleece, carcase and welfare traits?
- How much does wrinkle and fleece weight impact the number of lambs that a ewe can wean?
- Recording reproduction data in ram breeding flocks is time consuming and expensive, but what are the benefits?
- What role do body composition traits such as condition score, fat and muscle play in lifetime reproduction across ewe and sire types?

MORE INFORMATION
www.wool.com/mlp

Table 1. 2020 across-site MLP lambing update

SITE	DROP	JOINING CONDITION SCORE ¹	CONCEPTION ² (%)	FOETAL RATE ² (%)	TAGGING RATE ^{2,3} (%)	LAMB WEANING WEIGHT (KG)
BALMORAL	2015	3.4	97	160	116	24.0 (13.0 weeks)
	2016	3.2	96	148		
PINGELLY	2016	3	96	151	128	29.1 (11.0 weeks)
	2017	2.7	94	122	108	26.4 (11.0 weeks)
MERINOLINK	2016	3.4	94	148	110	28.0 (12.7 weeks)
	2017	3.4	87	127	105	29.2 (12.7 weeks)
MACQUARIE	2017	2.6	95	133	116	30.9 (12.1 weeks)
	2018 (Maiden)	2.7	95	111	94	31.4 (12.1 weeks)
NEW ENGLAND	2017	3.6	95	136	122	Yet to be reported
	2018 (Maiden)	3.1	93	105	110	

¹ The MLP project protocols denote a condition score of 3.2 at joining followed by 3.2 for single ewes and 3.3 for twin ewes at lambing. There are some site and year variabilities depending on age, supplementary feeding, and seasonal conditions.

² Conception, Foetal Rate and Tagging Rate are based on the number of ewes at pregnancy scanning.

³ Tagging takes place approximately 10 days after the end of lambing.

BREEDING FOR NATURAL FLYSTRIKE RESISTANT MERINOS

PUBLICATIONS

www.wool.com/flystrikelatest/#breeding

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-mulesed enterprise.



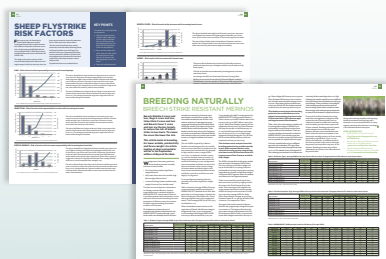
BREEDING AND SELECTION - INDUSTRY TRENDS
(May 2020)

This RD&E Technical Update, by AWI's Geoff Lindon, on sheep breeding and selection for flystrike resistance reports on changing genetic trends as indicated by MERINOSELECT ASBVs since 2000.



VISUAL SHEEP SCORES - PRODUCER VERSION
(Updated 2019)

This 74-page pocket guide for commercial and stud breeders provides a standardised framework for assessing and scoring visual sheep traits, including breech and wrinkle traits.



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*.



RATE OF GENETIC GAIN IN REDUCING BREECH FLYSTRIKE
(May 2020)

This RD&E Technical Update, by the University of Adelaide's Forbes Brien, discusses the relative gains between flystrike incidence and fleece weight, fibre diameter and reproductive rate and their implications for Merino breeding programs.



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*.

Don't let information to combat pest animals slip you by.

PEST ANIMAL CONTROL RESOURCES

The popular PestSmart website – pestsmart.org.au – has had a major upgrade making it even simpler and easier for woolgrowers and other land managers to find the most accurate information to effectively manage pest animals within Australia.

The PestSmart website includes information on the best practice management of pest animals.

Woolgrowers can use the free PestSmart resources to plan, manage and improve their pest control programs, confirming they are using the right tools, at the right time, in the right way.


The website includes resources for combatting 16 pest animals, including the five vertebrate pests that most affect woolgrowers' businesses: **wild dogs, foxes, rabbits, feral pigs and feral deer**.

PestSmart hosts pest animal management toolkits for each pest animal. The toolkits contain planning guides, national standard operating procedures for undertaking control methods, codes of practices, videos, case studies, factsheets and more.

Since the original PestSmart website was launched in 2015, the PestSmart management toolkits have had more than 2.3 million page views. The revamped website now offers even better access to pest animal management information.

The website also includes three glovebox guides for managing wild dogs (28 pages), foxes (28 pages) and rabbits (36 pages) as well as a field guide to poisoning wild dogs and foxes (36 pages), which were co-funded by AWI. The guides can be downloaded for free or hard copies can be ordered (charges apply).

As most pest problems need a people-based solution, the website now also includes a brand-new Community Action portal – community.invasives.com.au – to further support and provide coordinators with access to information to be fully equipped to manage community-led or public programs.

The website upgrade project received funding from the Department of Agriculture, Water and Environment through the Centre for Invasive Species Solutions (CISS) and included input from all levels of pest animal stakeholders to ensure that the site meets user requirements. The site is managed by CISS and further upgrades and content updates will be made over the next 12 months based on user feedback. 

MORE INFORMATION
www.pestsmart.org.au



FERAL DEER NOW ALSO IN THE SPOTLIGHT

Feral deer are becoming an increasing problem across Australia. In some parts of Australia, they are causing significant impacts on agriculture, the environment, and are spreading rapidly across the country.

In response, the brand-new role of **National Deer Management Coordinator** has been created with funding from the Department of Agriculture, Water and Environment through the CISS and led by SA Department of Primary Industries and Regions.

Dr Annelise Wiebkin, who started in the role in October, is working with stakeholders across government, industry, and the community to co-develop a National Feral Deer Management Action Plan and will join Greg Mifsud, the **National Wild Dog Management Coordinator**, and Dr Heather Channon, the **National Feral Pig Management Coordinator** (appointed in February 2020), who are also in similar roles.

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Professional Wild Dog Controller **Tim Booth**, on a strategic dog control program in the Upper Hunter.

HUNTER VALLEY BITES BACK AGAINST WILD DOGS

By using a range of complementary control techniques, the Professional Wild Dog Controller Program in the Hunter Valley of NSW has worked with landholders to reach a milestone, removing more than 300 wild dogs in just under the three years since it was launched.



Hunter LLS Biosecurity Officer **Richard Ali** with President of the Hunter Valley Combined Wild Dog Association **Frank Bragg**.

The Hunter's wild dog control program was developed after increasing dog attacks were being reported in the Upper Hunter, particularly impacting outlying sheep properties which was affecting confidence in the local industry.

The program is supported by Hunter Local Land Services (LLS), the Hunter Valley Combined Wild Dog Association (containing 11 member organisations), AWI and local land managers including Glencore, Bengalla, Yancoal, MACH Energy, Forestry NSW,

National Parks and Wildlife Service and FeralScan.

"Where we came from only a few years ago, there were a lot of isolated satellite sheep properties that were copping the brunt of a lot of wild dog activity," said Hunter LLS Biosecurity Officer Richard Ali.

The success of wild dog control relies on a co-ordinated effort of all landholders working co-operatively with private and government wild dog controllers.

Baiting using a variety of bait types and delivery techniques can be very effective and forms the foundation of an effective control program, when used as part of a coordinated effort by landholders along with other control methods such as trapping, fencing, shooting and guardian animals.

However, in any well designed control program for wild dogs, there are small numbers of individual wild dogs that do not come across a bait line, and others who do not take baits for a variety of reasons, many of which are not well understood. This is why wild dog control programs need to incorporate a range of techniques.

"We investigated and reviewed all of our techniques with the local wild dog associations and producers and found as we



Targeting wild dogs using **thermal imaging technology** on rifle scopes has been very effective.

were only using the approach of baiting, some dogs had evolved and adapted and were outsmarting us as older dogs knew to avoid the baits," Richard said.

"These dogs became problem dogs and hotspots of wild dog predation emerged, normally in close proximity to these outlying sheep properties.

"A new multi-tactic approach was needed to complement our use of coordinated baiting in the Hunter region."

Now under the Professional Wild Dog Controller Program, three fulltime professional controllers are available to assist local producers target and remove these problem wild dogs across the Upper Hunter using a combination of strategic and reactive methods, including trapping and shooting.

President of the Hunter Valley Combined Wild Dog Association, Frank Bragg, says taking these killer dogs out of the system is helping to restore hope in the future of the sheep industry for local producers.

"We couldn't be more pleased with the outcomes of the program so far, and the huge gains we have made working strategically together to combat wild dogs in this region," said Frank.

"The confidence that this is giving people to have the option to get back into sheep, and not have to worry that they are going to have the big levels of predation that we had before.

"After this prolonged drought, there is now the opportunity to go back into sheep and I think it's of the utmost importance we continue this program and strengthen it with funding well into the future."

PROGRAM GIVES FARMERS CONFIDENCE

Scone sheep producer Simon Deery says the program has been a saviour for his operation.

"We were pretty much getting a dog attack every six to eight weeks, and that was

consistent until the problem dog was removed," said Simon.

"Trying to build sheep numbers and be diverse on the farm was proving very difficult because we just couldn't keep the numbers up and we couldn't afford to buy them to have them killed.

"The trapping has been unreal, the program has been a real saviour here, not to the point our numbers have increased massively yet, but the attacks have decreased massively and that's the biggest thing."

More than 40 dogs have been removed from the valley near Mr Deery's property, east of Scone in the past two years.

"That's a massive amount of dogs and it puts a lot of confidence in us as farmers to know there is help, and it's only a phone call away and the results that we are getting are accurate, and it really makes you feel like it is worth doing."

THERMAL IMAGING TECHNOLOGY IS A HIT

One of the most effective techniques for the professional wild dog controllers is the use of thermal imaging rifle scopes at night to target problematic wild dogs in and around sheep camps.

"The use of thermal imaging technology has been very successful lately, especially when targeting killing dogs in sheep flocks – it has been a game changer," Richard said.

"The controllers have been able to be out at night on sheep camps waiting for the wild dogs to come in, specifically targeting those killing dogs and resolving a lot of issues that have been with us for a long time."

Tim Booth is one of the professional wild dog controllers who has been using a thermal imaging rifle scope.

"The thermal imaging scope is awesome and has been working very well because you're actually catching the dogs in the act so you know you're getting the dogs that need to be

taken out," Tim said.

"The technology has enabled us to remove a lot of problem wild dogs, some obviously quicker than others. It's another tool that can be used to combat predation but one that I think should be used as soon as a wild dog comes in and attacks the sheep. I'd love to see every farmer who is likely to get any of these predation issues to have and use thermal imaging technology." **E**

MORE INFORMATION

View a 22-minute video about the program on the Hunter LLS YouTube channel at www.youtube.com/watch?v=ZsLcEYS75t8

AWI-FUNDED WILD DOG COORDINATORS

AWI funds wild dog coordinators in each Australian mainland state to help landholders and communities work together to combat wild dog attacks. They also help coordinate on-ground wild dog control activities.

If you have a problem with wild dogs on your property, contact your region's wild dog coordinator below to see how you can get on top of the problem.

- **NSW (north-east)**
Dave Worsley 0429 638 078
- **Victoria (north-east)**
Lucy-anne Cobby 0488 712 616
- **Victoria (Gippsland)**
Brian Dowley 0408 436 600
and Mick Freeman 0477 358 061
(shared position)
- **South Australia**
Heather Miller 0488 426 395
- **Queensland (south-west)**
Skyela Kruger 0429 232 089
- **Queensland (central-west)** Vacant

SHEARING SHED SAFETY PROGRAM

A new shearing shed safety best practice guide and safety checklists aim to make the wool harvesting workplace safer for all shed workers. Developed by AWI and WA Shearing Industry Association, the resources are available for free to woolgrowers across Australia.

The development and launch of the Shearing Shed Safety Program, known as *SafeSheds*, is an important initiative for woolgrowers.

"Not only will this go a long way to increase entry, retention and longevity of staff, but it will also improve industry productivity and profitability," said AWI's General Manager, Woolgrower Services, Stephen Feighan.

"The shearing industry is one of the most physically demanding occupations out there. As an industry we need to do as much as is possible to reduce the risk of injuries and accidents occurring in shearing sheds as well as provide the best working conditions possible."

SafeSheds has been developed with input from right across the industry. It aims to help woolgrowers, shearing contractors and shed workers to assess a shearing shed's working conditions, environment and equipment, thereby enabling the woolgrower to create a program to rectify safety hazards and comply with modern workplace standards. Ultimately, *SafeSheds*



The launch last month of the AWI and WASIA Shearing Shed Safety Program, *SafeSheds*, at Don Boyle's 'Rina Dina' property at Broomehill, WA.

should result in a safer workplace for all participants.

"*SafeSheds* will assist in improving conditions for those working in shearing sheds and improve compliance with modern workplace standards to reduce risk and injuries and to reduce insurance and workers' compensation claims," said

WA Shearing Industry Association (WASIA) President, Darren Spencer.

By planning and documenting the improvements and steps to control risk, woolgrowers will be able to provide direct evidence of efforts in managing safety as required by relevant State Workplace Health and Safety Legislation.

BACK UP CHARLIE – FLEXIBLE SHEEP MOVEMENT SYSTEM

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.

- Easily transportable and easily assembled
- Flexible as it works with any sheep yard scenario and/or sheep handler
- Eliminates physically handling sheep into sheep handlers
- Can be assembled in a straight line or curved bugle format
- Creates a safe low stress environment for you and the sheep
- A labour saving system that increases sheep yard efficiencies
- The lightweight hock bars stop sheep turning around or backing up
- Proudly Australian owned, designed and made in Lockhart NSW
- Henty Machinery Field Days – 2016 Machine Of The Year WINNER!



BACK UP CHARLIE
 W: www.backupcharlie.com.au
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The cover and example pages of best practice guidelines and checklists from the Shearing Shed Safety Program, *SafeSheds*.

SafeSheds is available as an 80-page booklet with four sections:

1. Legal obligations of people involved in shearing
2. Guidance on how to assess their current shearing shed and manage risks
3. Detailed best practice guidelines for all areas of shearing operations
 - Module 1 – The shearing shed
 - Module 2 – Machinery and equipment
 - Module 3 – Amenities and facilities
 - Module 4 – Work practices
 - Module 5 – General working conditions
4. Assessment checklists
 - Full assessment
 - Pre-shearing checklist
 - Induction checklist
 - Post shearing checklist.

The *SafeSheds* booklet is available in downloadable PDF format in full, or in separate sections, from the AWI website at www.wool.com/safe-sheds or you can order a hard copy by phoning the AWI Helpline on 1800 070 099.

The *SafeSheds* checklists are also available in a handy mobile, digital, interactive format – see section to the right.

INDUSTRY COLLABORATION

SafeSheds is an industry collaboration, harnessing the support of industry with WoolProducers Australia, Pastoralists & Graziers WA, WAFarmers and Shearing Contractors' Association of Australia.

"The PGA encourages all farmers to get on-board with this program. Industry needs to reduce its lost time injury rate if it wants to put downward pressure on workers' compensation insurance premiums," said Chairman of the PGA Livestock Committee, Chris Patmore.

CEO of WoolProducers Australia, Jo Hall, agreed. "The program is a wonderful industry-led initiative aimed at making the wool harvesting workplace safer for all participants," she said.

"Workplace, health and safety is a key priority for WoolProducers Australia and the wider wool industry and the *SafeSheds* program will target one of the most exposed areas in our industry – shearing safety."

SAFETY CHECKLISTS ON YOUR SMARTPHONE

AWI and WASIA have partnered with the safety inspection tool iAuditor, from global technology company SafetyCulture, to provide the safety checklists in a digital

format. The *SafeSheds* iAuditor tool allows woolgrowers and shearing contractors to self-assess their wool harvesting workplace and work together to identify and rectify safety hazards from their mobile device.

The app allows you to add photos, create tasks and record actions based on improvements needed, record and document the assessment results with date and time stamps, share reports and track changes over time.

iAuditor also enables the shearing team to make real time incident reporting. Woolgrowers and shearing contractors can use the app for multiple sheds and properties and provide access to employees or shearing teams to record issues. It all works offline, even if you are in a location with poor or no mobile reception.

SafetyCulture's CEO Luke Anear commented: "It's great to be able to contribute via the Shearing Shed Safety Program. We're so pleased to be partnering with AWI and WASIA on this great initiative which will help keep our great Australian wool industry thriving."



The mobile inspection tool is free to download and use. Woolgrowers and contractors can subscribe to the service via www.wool.com/safe-sheds.

MORE INFORMATION
www.wool.com/safe-sheds

Hear more about *SafeSheds* in Episode 153 of AWI's The Yarn podcast, available at www.wool.com/podcast



HEAVY-DUTY FARM SHEDS



- Specialists in shearing sheds, yard covers, feedlot covers, hay sheds and machinery sheds
- Spans starting from 12 metres
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AWI-FUNDED IN-SHED TRAINING

AWI funds training for shearers and wool handlers 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.



Elliston, South Australia



'Goolma Station', Winton, Queensland



TAFE NSW Dubbo, NSW



WA College of Agriculture Denmark, WA



Rylington Park, Boyup Brook, WA



WA College of Agriculture Denmark, WA

Adequate numbers of highly skilled professional staff to harvest and handle a high-quality Australian wool clip in a timely manner are key to the profitability of the Australian wool industry.

AWI therefore funds hands-on practical training for shearers and wool handlers in the shed, aimed particularly at increasing their productivity, skills development

and professionalism. Training covers a wide range of experience, from learner to professional shearers and novice to professional wool handlers.

Best practice in shearing sheds results in a high quality wool clip and the health and wellbeing of both professionals and sheep.

Pictured above are a small selection of the

courses run recently across the country. 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. **B**

MORE INFORMATION
To arrange training in your state, phone AWI on **1800 SHEARS** or email swt@wool.com.

Designer of the SFC Roller, Pera Davies: "Regular rolling helps prepare muscles for work and also helps in post work muscle recovery."



HAVE A ROLL TO PREVENT INJURIES



Workers at 'Martins Well Station' in the Flinders Ranges of South Australia using the SFC Roller.

Shearing and working on the farm are physically tough jobs which can be very demanding on the body. Nobody knows this better than Pera Davies, a shearer of 40 years from the South Island of New Zealand who has shorn nearly two million sheep in his career. As a consultant with AWI, Pera has travelled across Australia running injury awareness and prevention workshops to wool harvesting industry workers.

A new self-massage device with three foam rollers, designed to help prevent and relieve musculoskeletal injuries suffered by shearers and farmers, has been developed by Pera Davies, the experienced shearer who developed the Shear-Jitsu catch and drag technique.

Pera has now developed a self-massage device for shearers and farm workers, known as the SFC Roller (Stretch, Flexibility, Circulate), which he says offers the same benefits as a sports massage: a reduction in inflammation and an increase in flexibility and circulation.

"The SFC Roller was developed as a result of my first big Shear-Jitsu workshop with AWI at Badgingarra in WA in 2017 during which I promoted foam rolling as a management tool for musculoskeletal injuries. Amazingly, out of 30 shearers who attended, not one could roll on a single foam roller (the only kind of foam roller available at the time) because their backs were too sore," Pera said.

"This was a reality check in terms of

the state of shearers' backs – and it was unfortunate because the available science supports foam rolling to aid muscle preparation and recovery."

So Pera innovated and developed a user-friendly three-roller alternative to a single foam roller. The combined surface area of the three foam rollers places less pressure on sensitive trigger point areas for muscle pain. This allows users to spend more time rolling back and forth on sensitive areas until the tenderness eases.

"Laying on the SFC Roller enables the upper body to effortlessly stretch out and down, decompressing the spinal column and stretching muscles and fascia in the shoulders, chest, abdominals and hips," Pera said.

"This gentle stretch helps decompress the spinal disks. Relieving the pressure allows degenerative disks to get the water, oxygen and blood flow needed for faster healing."

Pera says the SFC Roller is light, easily transportable and can be used in the shed or at home.

"The SFC Roller is being used by shearers, wool handlers and farmers across Australia: from jackaroos in need of a massage after riding motor bikes all day, to the Australian shearing team who used them to prepare for their winning performance at last year's Golden Shears in New Zealand," Pera said.

The SFC Rollers cost AU\$289, including delivery anywhere in Australia, and are available to buy from Pera's ShearJitsu website.

SHEAR-JITSU VIDEOS

Pera Davies developed the technique of catch and drag known as Shear-Jitsu, which is designed to minimise back injuries.

Shear-Jitsu is based on principles borrowed from the Japanese martial art of jujitsu. A key element of Shear-Jitsu is the best way for the shearer to move a sheep from the pen to the stand.

"Using Shear-Jitsu, shearers bring the sheep in a straight line to the pen door and then another straight line to the stand," Pera said. "By avoiding dragging the sheep in the traditional curved direction, the shearer is no longer leaning over (to the left or right) and thereby avoids putting their back,

knees, hips, shoulders and elbows at an unnatural and potentially damaging angle."

In collaboration with Pera, AWI in 2017 produced four short Shear-Jitsu training videos that highlight ways that shearers can prevent injury and increase the longevity of their careers. **E**

MORE INFORMATION

The videos are available free at www.wool.com/shearingresources

MORE INFORMATION
www.shearjitsuwellness.info

STUDENTS TAKE UP MERINO WETHER CHALLENGE

Students from schools across SA, NSW and WA have once again this year gained practical hands-on sheep management experience by looking after teams of Merino wethers as part of state competitions.

Merino wether competitions for school students are run each year in SA, NSW and WA with the aim to educate them about the commercial production of Merino sheep. The initiative provides the students with a memorable 'hands on' experience covering a broad range of sheep and wool production skills.

Initiated ten years ago in SA by the SA Stud Merino Sheepbreeders Association, similar competitions are now held in NSW by the NSW Stud Merino Breeders' Association and in WA by the Stud Merino Breeders Association of Western Australia. The competitions are supported by AWI, as well as individual studs, schools, teachers and students.

Each school team looks after several wethers (from studs in their state) for six months, with the students forming a close relationship with their wethers. This provides a unique and practical experience for the students, much different from classroom learning. Each school team then shows their wethers during a competition later in the year and are judged according to their meat and wool quality.

By attending training days and the judging events, and by looking after their wethers, the students gain:

- practical, hands-on skills in sheep management
- a better understanding of sheep and wool production as a business
- contact with many aspects of the Merino sheep industry
- a chance to network with industry participants and other students
- an enjoyable experience with Merino sheep and the industry
- a positive perspective on a career with sheep and wool.

SOUTH AUSTRALIA

Fittingly, the 10th anniversary of the School Merino Wethers Competition in September heralded the largest number of teams previously seen. 70 teams of three wethers (210 wethers) from 37 schools participated at the judging event at Adelaide Showgrounds under COVID-safe conditions. Although there was a very quiet atmosphere compared to the normally bustling Adelaide Royal Show period, it was a hugely successful event. Judges noted the marked improvement in the presentation of fleeces and animals and participants since the competition began in 2011.



NSW students at a competition training day in Dubbo in March.

WESTERN AUSTRALIA

In WA, eight teams from seven schools took part in the AWI Future Sheep Breeders Challenge, held in October at the WA College of Agriculture – Narrogin. Now in its fifth year, this annual competition is a bit different from those in SA and NSW in that only one bloodline is used, to educate students on the impact that the environment can have on sheep genetics and therefore the importance of making ram purchases from a breeder with a similar climate to their own. This year, teams looked after six wethers (from Barloo stud in Gnowangerup) but showed four at judging. Competition was fierce and quality was top. Hear more about this year's WA competition in Episode 150 of AWI's The Yarn podcast at www.wool.com/podcast.



The shearing at the competition in Adelaide.

NSW

In NSW, more than 50 schools from across the state participated in the School Merino Wether Challenge, running teams of three Merino wethers (totalling 350 wethers) for six months. Unfortunately, COVID this year prevented the schools from attending the judging, which was held at Dubbo TAFE NSW in August. However, this year's competition was still the biggest and best one yet. Hear more about this year's NSW competition in Episode 141 of AWI's The Yarn podcast at www.wool.com/podcast, view a 2½ minute video at www.youtube.com/AWIWoolProduction and log on to www.facebook.com/dubboschoolwetherchallenge for images and videos.



WA students presenting the wethers at Narrogin in October.

PHOTO: Robert Lang Photography

SUCCESSION PLANNING

CREATING A LASTING LEGACY FOR YOUR BUSINESS AND FAMILY

GUIDE TO HELP WITH THE HARD DECISIONS



Another good source of information for people looking to broach the subject with family members is the *Guide to Succession*, produced in 2007 by GRDC with the support of AWI and other major agricultural organisations.

The publication is divided into three sections. The first section provides guiding principles from professionals who may contribute to the succession planning process: an agronomist, an accountant, a lawyer, a financial planner and a generation consultant. The 16 case studies in the second section are drawn from the actual experiences of farm families. The final section provides tips and checklists to help in the initiation, development and implementation of a plan. **B**

MORE INFORMATION

Download the publication from www.wool.com

- Formalising roles and responsibilities, and reward and pay system
- Why we need documented business policies
- Understanding your business structure; legal and tax implications
- Understanding the role of business advisors in the succession process. **B**

MORE INFORMATION

View the webinar via www.bigmarker.com/sheep-connect-tasmania.

A free six-page information pack from ProAgTive is available from www.proagtive.com.au.

Developing a succession plan that meets the expectations of all involved is not easy. However, a recent webinar saw leading expert on the subject, Isobel Knight, guide woolgrowers through the important issues to consider. Don't worry if you missed the webinar, it was recorded and is available free to view for all woolgrowers across the country.

Succession planning involves the transfer of ownership and control of farming assets to the next generation charged with the responsibility of continuing the business.

It can be a complex issue for farm businesses, with often four generations actively involved. Understanding the different motivations, characteristics and needs of these groups is essential for constructive planning to occur.

It is important to communicate openly with other family members and professionals.

A webinar hosted in October by AWI's Sheep Connect Tasmania network provides a useful starting point for families. The webinar was recorded and is available to view on-demand for free.

The 1¼ hour information-packed webinar is delivered by Isobel Knight, the owner and a

director of family farm succession planning business ProAGTive. Isobel has worked closely with hundreds of individual farming families across Australia.

The webinar is highly recommended and provides viewers with tools and strategies to address the following areas of their business:

- What is succession planning, and why is it so complex?
- What are the business and personal goals of each family member?
- What is the purpose of your business?
- Is your business in a financial position to meet the business and personal goals?
- Understanding your family dynamics and the intergenerational differences
- The importance of a formal communication strategy
- The importance of discussing and planning for retirement

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MARKET INTELL

AUCTION MARKET TURBULENT

The past few months have seen Australian auction markets experiencing some of the most turbulent price gains and losses in history. From the lows of an EMI of 858ac at the beginning of September, it took just seven weeks of auctions to move 42% higher due to some good demand, which was then held back as the COVID-19 pandemic worsened again across Europe and other areas of the world.

Some of the sharper rises have been partly due to macro-economic events outside the wool or textile industry. The spike in mid to late September came on the back of the ban on Australia cotton imports into China. Some of the Chinese wool factories feared the ban may be extended to include wool, which would initially severely impact supply but then price, as all Chinese importers would then have to fight for the limited Merino wool supply from South Africa, New Zealand and South America.

The rush upward of price in early November came under similar circumstances and reasoning with the unconfirmed but seemingly real ban on Australian wine, live lobster, timber, sugar, coal and copper adding to the already affected cotton, beef and barley.

In a positive for wool, it is assumed by most that China is seemingly swapping out Australian produce for US produce to satisfy the agreement met earlier in the year for China to help right the Sino v US balance of trade by buying more US product. Under this line of thinking, Australian wool should be somewhat protected as the Chinese cannot get apparel wool from anywhere else, so they would hurt themselves more-so by a ban.

A tariff under this similar scenario may be a possibility but does not fit their current modus operandi. Under this positive approach, Australian exporters should then be able to continue to buy with confidence knowing 90% of their trade opportunities would remain open.

AUSTRALIAN WOOL PRODUCTION DOWN

The progressive comparison of total weight for July 2020 to the end of October 2020 compared with the same period last season shows a cumulative season loss of 11.4% production.

AWTA Ltd has tested 84.8 mkg this season compared with 95.6 mkg for the equivalent period last season.

FIGURE 1: COVID EMI - IS THIS LOOKING LIKE A V SHAPE?

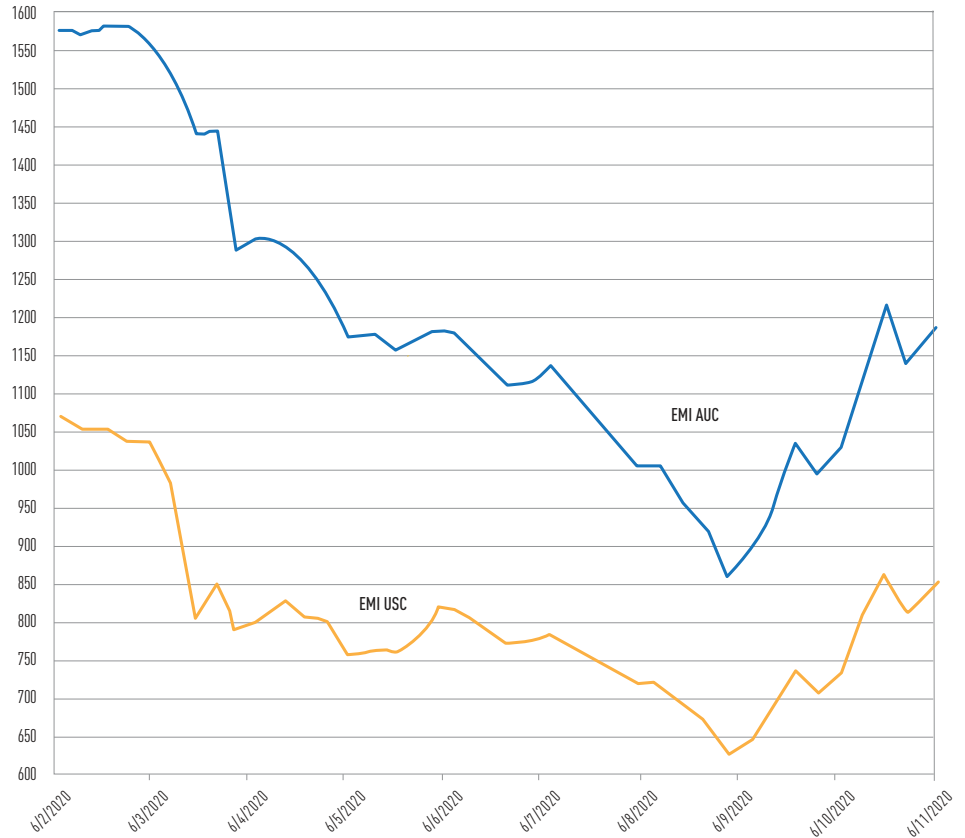
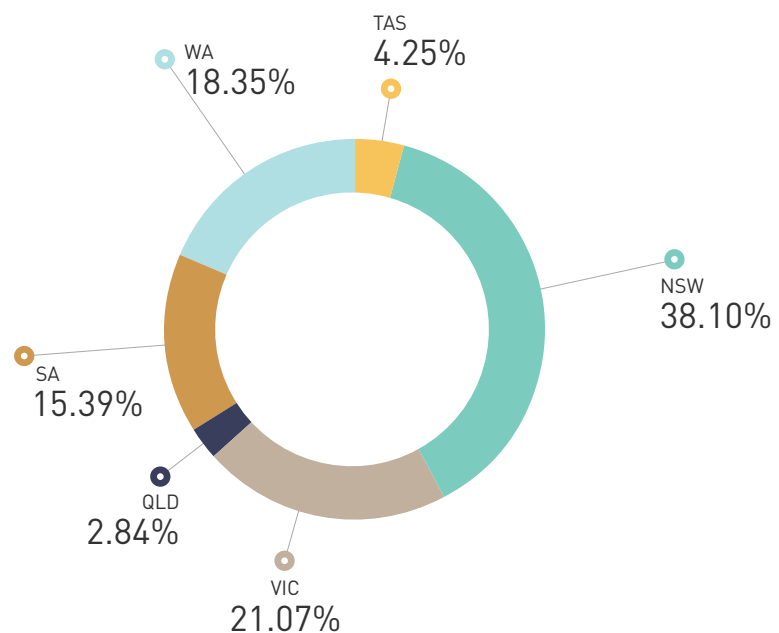


FIGURE 2: PRODUCTION BY STATE JULY-OCT 2020



INTELLIGENCE REPORT

AUSTRALIAN WOOL EXPORTS UP BY VOLUME, DOWN BY VALUE

(Source ABS)

In the first three months of the 2020/21 season, Australia exported 5.7% more wool by weight than during the same period last year. However, despite the increase in volume, the value of those exports fell by 29% on a year-to-year comparison due to the significant market drop since March 2020.

Given demand is significantly lower at retail for all finished textile products, the attraction of the lower price and the demands of machinery needing to be fed are assumed to be responsible for most of the growth in export volume.

In the first quarter of 2020/21, 95.9% of total Australian wool exports was raw greasy, by weight, whilst the remaining 4.1% of the total export was in the value-added semi processed state.

The export data from the ABS highlights the retraction of export destinations accepting raw wool to engage in processing of Australian wool. Just 11 countries are currently buying raw wool from Australia (see Figure 3). Meanwhile, just 18 countries are purchasing the scoured or carbonized product directly from Australia (see Figure 4).

The first quarter of the 2020/21 season has Australian wool exports becoming even more reliant upon **China** as the dominant destination. China's market share of greasy Australian wool by weight grew to more than 90% of all exports and they have purchased 24% more than at the same period of last season. The value of that import though was 12% lower. China's import of semi processed wool from Australia dropped to just 8.77% market share, well behind South Korea (41.08%), Germany (10.27%) and Thailand (9.53%).

Similarly, the **Czech Republic** share of greasy Australian wool has grown 32% for the first quarter and represents 4.2% of the clip, up from last season's total of 3.2%. While producing a stronger percentage gain by weight above China, the value decreased significantly further (-41%) than China due not only to the lower prices but also an increase in export of the relatively cheaper non-Merino types broader than 22 micron.

Other destinations to improve their purchasing of Australian greasy wool, albeit at much lower weight levels, have been **Uruguay** (0.12%) and the **US** (0.13%) which accept mainly the broader Merino/fine comebacks of 20 to 23 micron and the broader crossbreds.

Conversely our **Italian** partners have reduced their import share of Australian wool to just 1.54% of our clip during the first three months of the season. This is a 67% reduction in Italian importing compared to their export share of 4% in 2019/20. The **Egyptian** export destination (0.49%) is sometimes considered an extension of the Italian market with Italian interests playing a large role in the import of wool to that country. Egypt has an Association Agreement with the EU which grants it duty-

free access to the EU market for manufactured goods. That destination has similarly seen a drop of more than 70% in their purchasing.

India has dropped to just a 2.79% market share compared to the annual figure of 5.2% last season. Importantly other premier Indian processors operate into **Thailand** as an export destination of scoured wool. **Bulgarian** imports from Australia (0.13%) are down 84% year-on-year. B

FIGURE 3: AUSTRALIAN GREASY WOOL EXPORT DESTINATIONS JULY-SEPT 2020

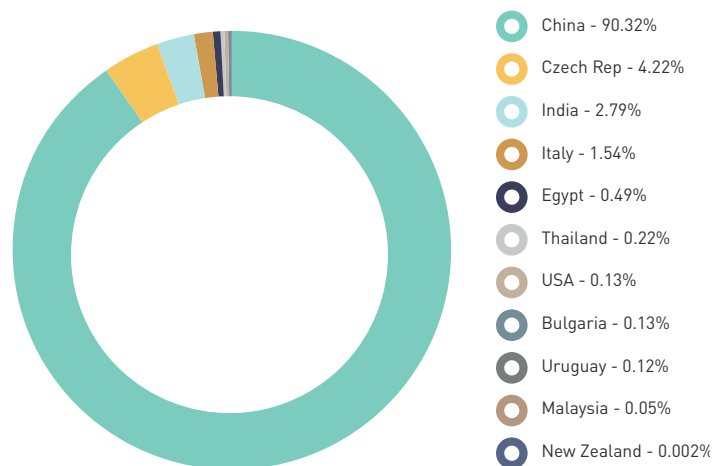
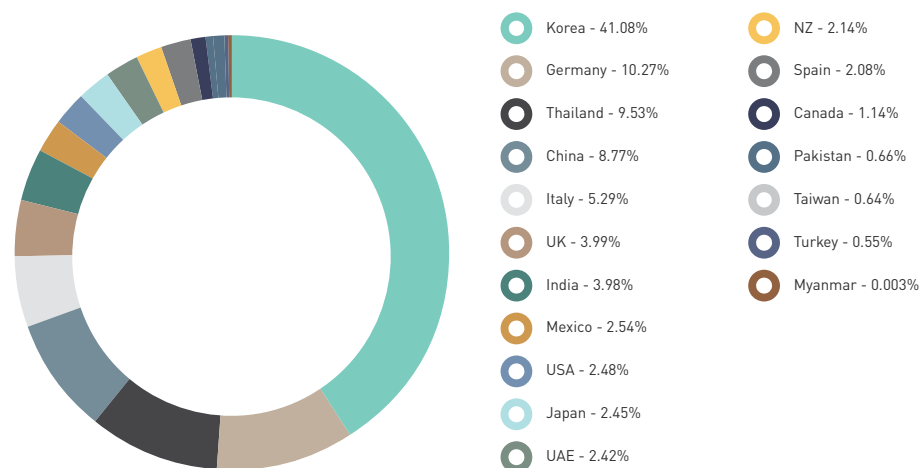


FIGURE 4: AUSTRALIAN SCOURED AND CARBONIZED WOOL EXPORT DESTINATIONS JULY-SEPT 2020



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 (August 2020 – October 2020) in Australian dollar terms compared with the previous five years August 2015 to July 2020 (circles) and the decade previous to that, August 2005 – July 2015 (squares).

This past three-month period has been dominated by the continued negative impact of the coronavirus pandemic on the global economy.

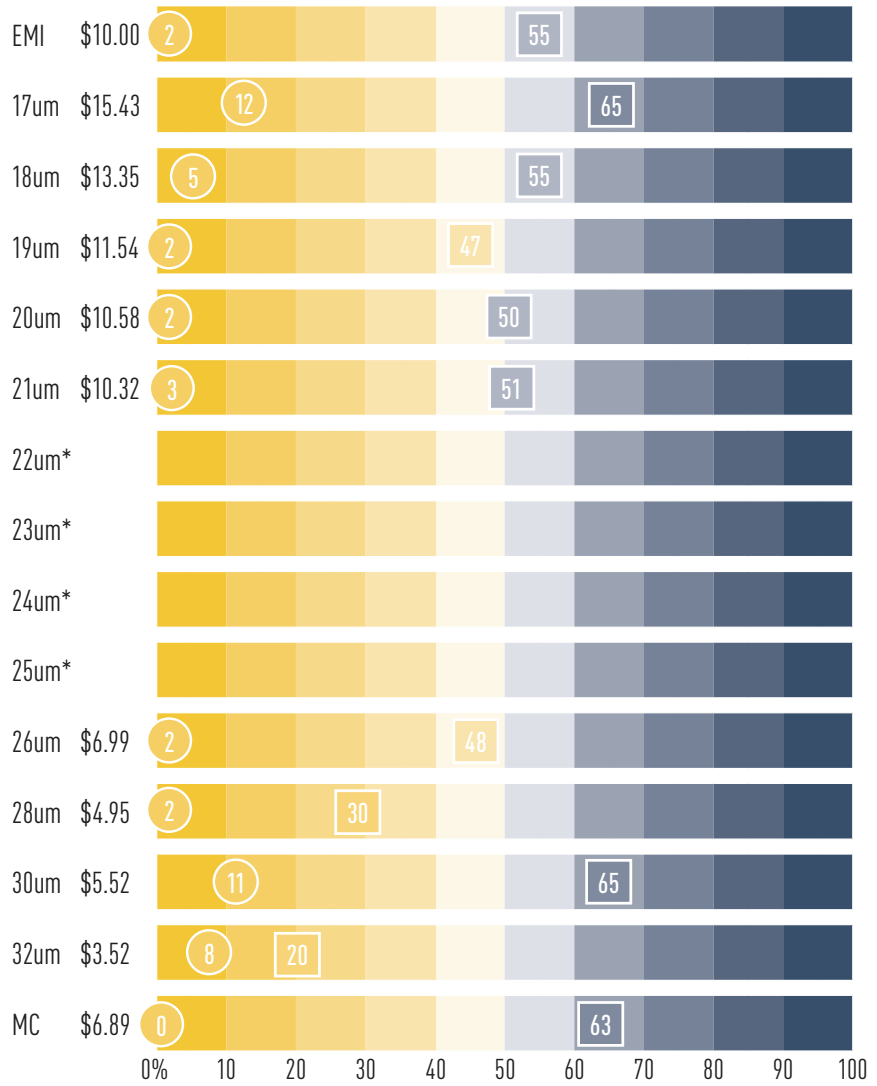
For the past three months, the monthly EMI averaged at \$10.00 which is a \$1.48 drop from the average for the previous three months, and is tracking at the 2nd percentile against the previous five-year monthly EMI. This means that in the previous five years the monthly EMI has recorded a lower price than the current \$10.00 (August 2020 – October 2020) for only 2% of the time.

While the EMI is tracking at the 2nd percentile over the previous five years, it is tracking at the 55th percentile when compared to the decade May 2005 – April 2015. This means the current EMI of \$10.00 (August 2020 – October 2020) is still higher now than it was for 55% that decade.

18 micron averaged at a monthly value of \$13.35 (5th percentile for the previous five years and 55th percentile for the decade before that), 21 micron averaged at \$10.32 (3rd percentile for the previous five years but 51st percentile for the decade before that), and 28 micron averaged at \$4.95 (2nd percentile for the previous five years and 30th percentile for the decade before that).

For the past three months, Merino Cardings averaged at \$6.89, operating at the 0th percentile for the previous five years and at the 63rd percentile for the decade before that. **B**

AVERAGE MONTHLY EMI FOR AUGUST 2020 – OCTOBER 2020 COMPARED WITH
 ● PREVIOUS 5 YEARS AUGUST 2015 – JULY 2020
 ■ THE DECADE AUGUST 2005 – JULY 2015



*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 now 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 5,000 woolgrowers' mobile phones. If you would like to subscribe to the free SMS service, visit www.wool.com/sms 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. **B**

MORE INFORMATION
www.wool.com/marketintel

BE A PART OF THE DIGITAL REVOLUTION

Across the world, the COVID-19 crisis has highlighted that individuals and enterprises are more than ever looking to digital platforms to undertake research, communication, and business transactions. For the Australian wool industry and woolgrowers, WoolQ provides an opportunity to harness digital efficiencies across the wool-growing and selling cycle.

In all industries, global and domestic, 2020 has seen a significant surge in the adoption of digital platforms and an increased reliance on e-commerce. Many of the business challenges brought on by the COVID-19 crisis have been alleviated or mitigated by the substitution of traditional commerce by e-commerce and other digital channels. In fact, businesses with a significant e-commerce component have gone from strength to strength. E-commerce is here to stay and will continue to grow in importance long after the pandemic is over.

WoolQ aims to be the online focal point of the Australian wool industry by delivering information, data, selling choices and trading opportunities to woolgrowers, their agents and other industry professionals in a single online venue.

The idea for WoolQ began five years ago when the Wool Selling System Review (WSSR) proposed “an industry focused digital information portal as a tool to promote transparency and choice in the wool industry”. The development of this platform

was subsequently unanimously supported by the separately formed Wool Exchange Portal (WEP) Working Group, which comprised members from AWEX, AWTA, AWH, exporters, brokers and woolgrowers.

The WoolQ platform was delivered to the wool industry in stages from February 2018 through to July 2019, on time and on budget.

WHAT IS WOOLQ AND WHAT DOES IT DO?

In general terms, WoolQ is a platform that aims to be the primary online entry point for woolgrowers and their business partners to input, access and store information and data relating to their wool-growing enterprises. WoolQ can provide woolgrowers with a suite of tools to analyse their data to enable them to make more informed decisions regarding the production and sale of their wool.

WoolQ provides a platform for wool industry businesses to develop and promote rich profiles and value propositions that can be easily searched and shared by those users wishing to build industry partnerships/relationships.

It also delivers online selling options that allow an alternative avenue for woolgrowers, their brokers and registered buyers of Australian wool to promote and transact their wool interest outside the existing selling venues at a lower cost.

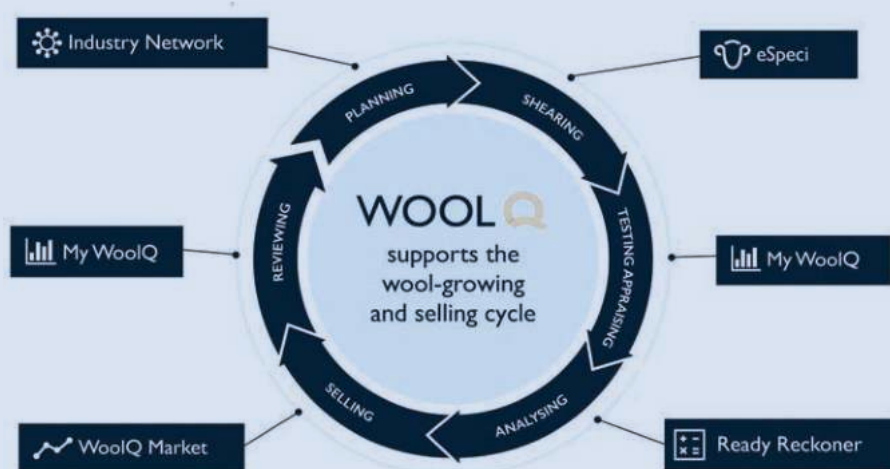
Like so much new technology, users will discover unique benefits for their specific enterprises as they continue to use the platform.

Many of the downstream consumers of quality Australian wool are demanding a level of traceability to promote their products. AWI is focused on delivering meaningful data traceability for these consumers. For its part, WoolQ digitally delivers the first stages of that supply chain traceability journey by collecting and storing verifiable data from the shearing shed to the Australian port.

The WoolQ strategy was always about the medium to long term; the returns from the platform would increase over time. These returns include both microeconomic returns to woolgrowers from their use of the platform's tools, and the macroeconomic value of the platform as a whole to industry.

HOW DO I ACCESS WOOLQ?

Users first need to register at www.woolq.com. Video tutorials, user guides and a customer assistance service are available.



- eSpeci** is a digital copy of the paper speci – from the wool book through to the wool specification. If you can do a paper speci, you can do an eSpeci.
- MyWoolQ** is the storage area for all your clip information.
- Ready Reckoner** is a tool with two sections aimed at helping you gauge the value and assess the performance of your clip: 'Market Analysis' allows you to get an instant estimate of the value of your clip from up-to-date market pricing; 'Market Results' allows you to see recent

- sale prices to benchmark and evaluate your clip performance against similar wool in the market.
- WoolQ Market** makes Australian wool trading easy, fast and efficient for buyers and sellers.
- Industry Network** houses Australia's first industry directory of woolgrowers, classers, brokers and buyers. It allows woolgrowers to promote their businesses, develop partnerships and learn of new trends and developments.



WIN!!!

If you submit a photo that gets published in Readers' Photos, you'll receive from us a paperback copy of the Kondinin Groups' 'The Story of Wool'.

READERS' PHOTOS!

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](https://www.instagram.com/beyondthebale) on Instagram.



GOOD RAM SHEARING!

Neil Seaman (@farmerneilau), who appeared on season 10 of the Seven Network's *Farmer Wants a Wife*, of **Crookwell** in **NSW**, tagged this impressive photo [#beyondthebale](https://www.instagram.com/beyondthebale) on Instagram, saying: "On the October long weekend some people camp, some visit relatives, some just relax..... A dedicated select few however, decide to spend their weekend shearing 160kg Poll Dorset Rams. Good job Bomber and Boc." We definitely agree!



PERKS OF THE JOB

Chontelle Perrin (@chonpez) of **Young** in **NSW** was spot on when she titled this photo 'Perks of the job'. Thanks for tagging the photo [#beyondthebale](https://www.instagram.com/beyondthebale) on Instagram, Chontelle.



MERINO IS BUILT FOR THE MONARO

Angus Hobson and **Hannah Marriott** run self-replacing Merino flocks on properties near Bombala and Delegate in the Monaro region of NSW. This photo, from their **Delegate** property 'Weewalla', was taken in early August 2020 and shows that the 'Merino is built for the Monaro' as well as most other climatic conditions in Australia. This image was used on the cover of AWI's 2019/20 Annual Report, available at www.wool.com/annualreport.

THIRSTY WORK

Ewes and lambs coming in for a drink on the property of **Marilyn and Mark Phillips**, 'Omar' at **Florieton** near Morgan in **South Australia**, about 170km north-east of Adelaide.



SLEEPING BEAUTIES

Rebekka Jackson of **Pyalong** in central **Victoria** sent in this gorgeous photo of newborn twins dozing in the sun.



SHEARING TIME!

Jane (@theshadybaker) lives on an outback **NSW** sheep station, baking and raising a family. But come shearing, she is kept busy feeding and supporting the mustering crew. Jane tagged this photo #beyondthebale on Instagram, saying: "Sheep are in the yards, sausage rolls are going into the oven, it must be shearing time."



HAPPY AS LARRY

Mae and Thomas McNally were happy to help with the stragglers lambs while shifting sheep at **Mysia** in north central **Victoria**. The photo was sent in by their mother **Sarah McNally**.



A LITTLE VISITOR

James Williamson loves being out with his dad **Simon**, especially when it comes to trail feeding sheep. **Simon and Wendy Williamson** farm 'Nevertire' at **Kukerin** in the **WA** wheatbelt.

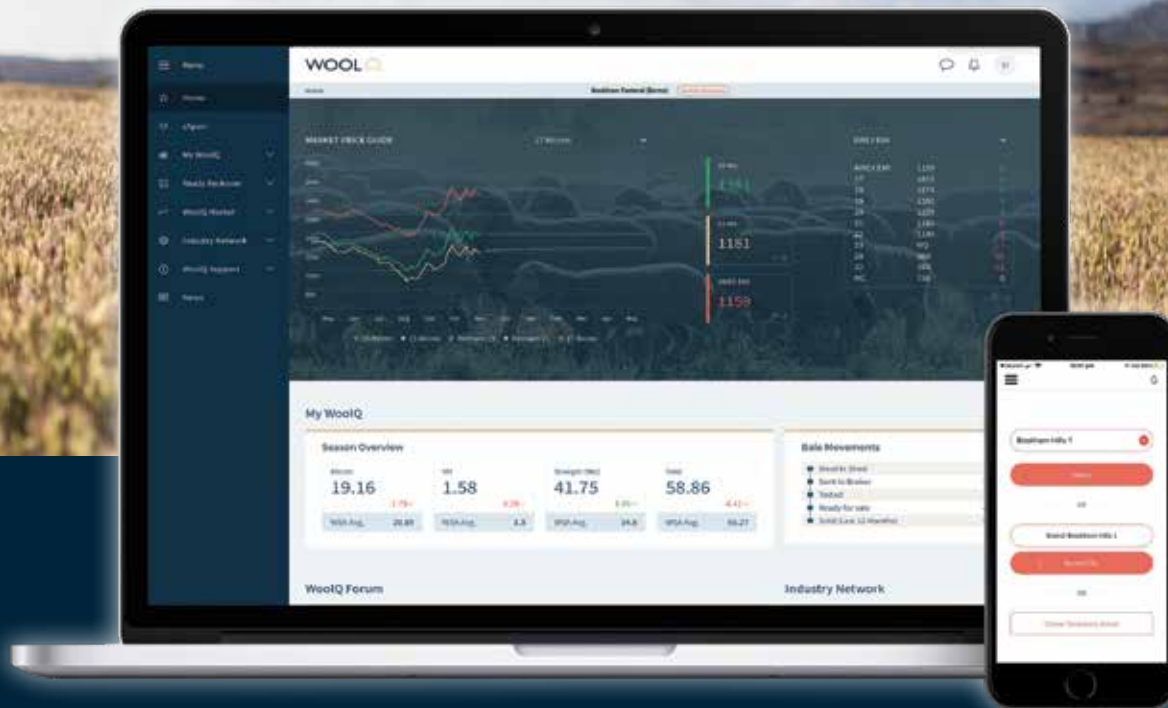


LITTLE HELPER

Lauren Elizabeth Jenkins, age 3, helping out in her grandfather's shearing shed at **Woodsdale** in **Tasmania**. The photo was sent in by her father **Rodney Jenkins**.



WOOL



WHAT IS WOOLQ?

WoolQ is a platform to store data, review wool production, value wool and provide selling choices to woolgrowers, their agents and other industry professionals in a single platform. The key tools of the platform are:

WoolQ Network

A wool industry directory. Allowing woolgrowers to promote their businesses, develop partnerships and learn of new trends and developments.

WoolQ Ready Reckoner

Value your clip. Using the latest market results' real-time pricing to give woolgrowers and brokers an indicative price of wool ahead of sale.

My WoolQ & WoolQ eSpeci

A repository for all clip production information. Allowing woolgrowers to collect and store clip data including sales and test results from multiple brands.

WoolQ Market

Built to complement open-cry auction, it delivers an online alternative venue for the selling of wool. Sell through auction or the set price bulletin board.

Register at www.woolq.com

We can help you set up your WoolQ account. Call us on 1800 070 099 or email info@woolq.com.