



AUSTRALIAN SUPERFINE WOOL GROWERS' ASSOCIATION INC.

ANNUAL 2018-2019

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CONTENTS

- | | | | | | |
|-----------|---------------------------------------|-----------|---|-----------|--|
| 5 | ASWGA President's Report 2018 | 32 | Next Generation Tools Support Wool's Future | 50 | Polyester: A modern day scourge |
| 6 | Mill Visit to Japan | 33 | ASWGA Fleece Competition winners 2018 | 52 | Benefits to skin health by wearing merino wool |
| 11 | Goulburn Yass Dinner & Farm Tour 2018 | 34 | ASWGA Annual Fleece Competition | 53 | CRISPR/Cas9 - a revolutionary technology |
| 14 | 55th Ermenegildo Zegna Wool Trophy | 36 | 2018 IWTO Congress – Wool for Future Markets | 54 | Sheep CRC 2018 |
| 15 | Superfine Women | 38 | 10th World Merino Conference, Uruguay | 55 | Responding to Stress in Tough times |
| 20 | The Australian Yarn Company | 42 | Traceability and connecting growers and mills | 56 | AWEX 2018 |
| 22 | We are in this together | 42 | Bellevue Park Wool | 58 | New solutions to target pest and weed problems |
| 23 | Tarrangower Merinos | 44 | Ross Tully OAM | 60 | Science again backs sleeping in wool |
| 24 | Ararat-Barunah Regional Report | 44 | Jill Hundy | 61 | Wool Product Wellness |
| 25 | Albury-Wodonga Regional Report | 45 | ASWGA Annual Photographic Competition winner 2018 | 62 | ASWGA Membership form |
| 25 | Goulburn – Yass Regional Report | 46 | The Wind that never blue | | |
| 26 | Tasmanian Regional Report | 48 | The Female Phenomenon | | |
| 26 | Mudgee Regional Report | 49 | Sheep and Fleece yet again headliners at the Sydney Royal Easter Show | | |
| 27 | Hamilton Regional Report | | | | |
| 27 | South Australia Regional Report | | | | |
| 28 | Western Australian Regional Report | | | | |
| 30 | New England Regional Report | | | | |

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COUNCIL 2018-2019

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ASWGA PRESIDENT'S REPORT 2018



It is my pleasure to give a report on the 47th year of the Australian Superfine Wool Growers' Association. It has been a great time to be the President of an Association when wool prices have improved to a level where wool growers around Australia are not in a state of shock when they sell their wool.

It is my pleasure to give a report on the 47th year of the Australian Superfine Wool Growers' Association. It has been a great time to be the President of an Association when wool prices have improved to a level where wool growers around Australia are not in a state of shock when they sell their wool.

Although prices are recorded at historically high levels, this is only for the modern era and not taking in the cost of inflation and the everyday running costs of a farm. I sincerely hope we are not on a roller coaster ride and wool producers have the opportunity to see these current price levels long into the future.

Our Annual Fleece Presentation Seminar weekend was well run by the Goulburn/Yass branch. Compliments to all who worked to make the event enjoyable for all. Congratulations to all our Regional fleece competition winners, especially Mark and Lesleann Waters, who took out the champion fleece with a very special 74s type fleece.

At the end of May, I had twelve meetings with manufacturers in Japan. Their hospitality was very gracious and friendly. In summary, the Japanese are still very much in love with ASWGA members' wool and wish to do further business with our members, especially in cardings and lambswool. Unfortunately, their currency, the Yen, is very low compared with the US Dollar and they are having trouble competing at auction for raw wool. But the Japanese are still very much in business in the carding world and blending with other fibres. Sports wool, babies' clothing and next-to-skin wear are very much on their radar.

It was my pleasure to present Marco Schneider with their Mill membership certificate. We thank Marco and Giovani Schnieder of Switzerland for joining our Association. It was just as equally pleasurable to present a Mill Membership certificate to Colin Walker of Bendigo Woollen Mills. Colin purchased Australian Country Spinners and is our only Australian Mill Member. His Certificate was accepted by his wool buyer, Tony Stills. These awards were presented

at the Goulburn/Yass Presentation Dinner Seminar in May, where Bendigo Woollen Mills was our major fleece sponsor.

I sincerely thank Paolo Zegna and his organisation for their continued fantastic financial support of our Association. Paolo, your award presentation dinners are a highlight of the wool growers' year. I hope all members can one day make the finalists' list so they can experience such a wonderful night. Please support these competitions; they are very rewarding for all who enter - whether you are a member of ASWGA, or are thinking about joining.

I also thank all those who very generously sponsored events throughout the year. Without these sponsors, ASWGA would not be able to represent our Australian wool growers, who produce stylish wool to the world. We are the only organisation which represents quality superfine wool growers, from grower to end user. We are doing all we can to advertise members wool to mills and the end user.

I thank Dr Peter Morgan, who is doing the monthly reports on curvature from AWTA Test results and distributing them to all farm and mill members.

I thank AWI for their support during my first year and hope our friendship can only grow. I congratulate Cathy Hayne on her continued support for our organisation, not only as Treasurer, but her work improving our website and Facebook pages - this will always be an ongoing project.

I wish to thank all branch Chairs and Councillors for their continued support of the Association. A massive thank you to Simon Cameron who has done a marvellous job as President and for what he has done in helping me through the transition stage as incoming President. I couldn't have done it without him.

Now a very big hug for Melissa Mulley. Thank you, you are my email and phone saviour. Without you we would not exist in our current state.

During my term as President, I will give my all to represent ASWGA the best I can on the world stage. I urge any stylish wool grower to join our friendly organisation. It is my pleasure to represent progressive and passionate wool growers.

In closing, a massive thank you to all the team who have put this edition of the ASWGA Annual together. Jeff Gill, Susan Rowbottom, Lyndall Eeg, Simon Cameron, Lesley Prior, Vera Taylor and Melissa Mulley and all others that have helped with editorials and photos. Anyone wishing to help in the future, please pass on interest to Melissa.

Danny Picker
ASWGA President





MILL VISIT TO JAPAN

Japan has a population of 127 million people, with 11 million people living in Tokyo alone. There are only five to six worsted and spinning companies and under twenty yarn distributors left in Japan; however Japan is still a major force around the world.



29 May 2018 – 7 June 2018

We arrived at Tokyo on 29 May and were greeted by Shigeki (Sean) Tobe from Motohiro Sydney and the Japan office.

Daidoh - Member

On 30 May, we had a meeting with Daidoh Ltd, which is a current Member through a property at Mudgee, NSW, 'Gundowda Station'. We were met by their Director/ Executive Officer Taka Saito and General Managers Hiroshi Takegawa and Kinue Takao. Mr Saito is also the President and CEO of

Pontetorto of Italy. Daidoh was established in 1849 and it has two remaining mills in China; at one time they had five.

Daidoh purchased a mill from an Italian weaving company named Pontetorto. From this mill they sell into forty-plus countries around the world; they also have a spinning company in China. Daidoh has a farm-to-store system, Mudgee to China, then to Italy and then back to Japan. They also purchase tops from Italy and China and do deals with Motohiro of Japan. They also sell garments through the US company, Brooks Brothers, which has been operating for 200 years. One

major subject which came up was their big use of carding wools, mainly in casual wear.

Motohiro

Motohiro is a possible new member, if we deal with their clients which has a \$200 million U.S. business. We met with their President, Tetsuya Motohiro, plus Shigeki (Sean) Tobe and Osamu Yonezawa. Sean is the Purchasing Greasy Wool Buyer based in Sydney and managing officer of their textile division, selling tops around the world. His offices are everywhere - Sydney, Tokyo and Osaka. Motohiro buys ASWGA type greasy wool through Schneider Group and Sean buys 19-micron-plus wool for Motohiro. Motohiro and Schneider have a joint venture of processing in China and sell tops all around the world.

Some of Motohiro's clients are Muji, Nikke and Toabo and weaving companies in Osaka

such as Otsu Keori and Nakaden. Motohiro is a major player in Japan and I have asked Sean to join as a mill member and he replied that all is possible if ASWGA can supply wool to some of their clients. Motohiro wishes to do contracts with unmulesed farm members with wool micron between 18 to 20. Contracts would be 20 to 30 bales from individual growers (1,000 bales in total) lasting three to five years, a Muji contract. They also want all the lambswool we can supply between 15 to 20-micron, 30 to 55 mm in length, with a special order of 14 to 15-micron of 3,000 kg required shortly. However, Motohiro currently believes that the market is too high and will try to buy in August/September when wool is of a larger supply.

AWI Tokyo

We then met with Akira Nakasato, the key Account Manager and their employees. They are trying to educate 127 million people about the therapeutic value of wool in babies' wear for eczema and sensitive skin. Currently one in five babies has some type of skin irritation problem. They are also investing in promoting sportswear. As well, a company called Nano-Universe is producing cardigans and jumpers out of 16.5-micron wool, calling it extra fine merino and selling them for around USD \$100 per garment. On the negative side, a company called Uniqlo is selling an extra fine pure new wool jumper for around USD \$40, this type of wool used could be a worry, these are being processed in Vietnam.

Woolmark's Tokyo office is putting together a story and video about provenance in wool (with a documentary to follow), which could be sent to all wool manufacturing businesses in Japan. It is clear that casual wear is growing, especially in summer, but with the small supply of wool compared to ten years ago, a fall in the market should only happen if the market gets too high. Confidence in woollen products seems high.

Nakaden.

We then met with members of Nakaden, a possible new member – a weaving company



Akira & Nakasato and staff, Woolmark Tokyo

- and produces supreme garments. They included their President, Kosuke Nakashima, Exec Vice President, Kimihiro Nakashima and their Senior Advisor, Masahiro "Michael" Kotsuki. Michael worked in Australia for twenty years with Itochu buying division.

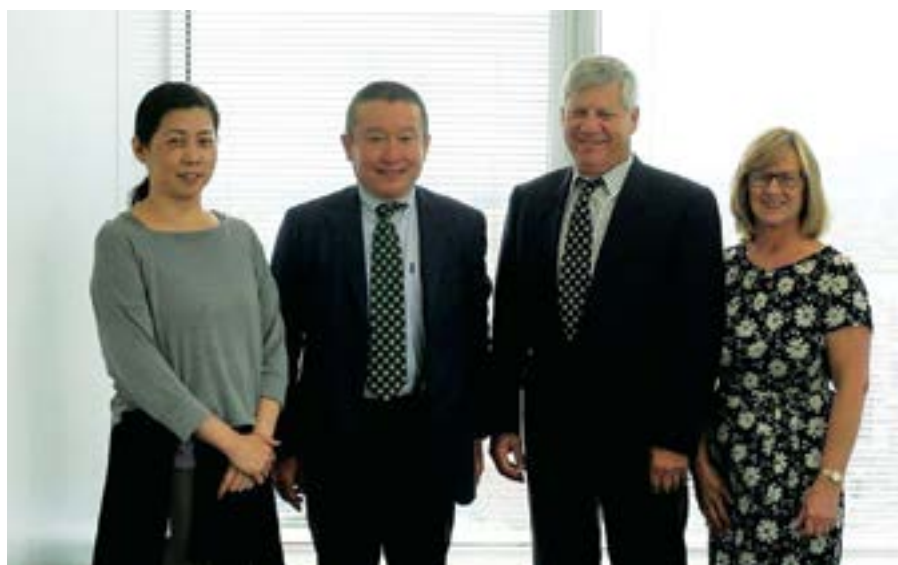
70 % of their business is women's wear. They hope to head in the future with 17.5 to 18.5-micron weaving. Nakaden is a weaver and produces quality products. They buy tops through Motohiro/Schneider and wish to use our ASWGA logo and swing tag on wool bought from ASWGA members. They are 70% carding and 30 % worsted (super 180's). They want contracts with ASWGA growers' lambswool, with initially 3,000 kg of 15 to 16-micron. They are also interested in 18.5 to 19-micron lambswool, but overall, any micron. They might join as a mill member. If we can find this initial order, I suggested a 90% chance of supplying. This was a very positive meeting if anyone has

lambswool for sale and a good opportunity of joining ASWGA.

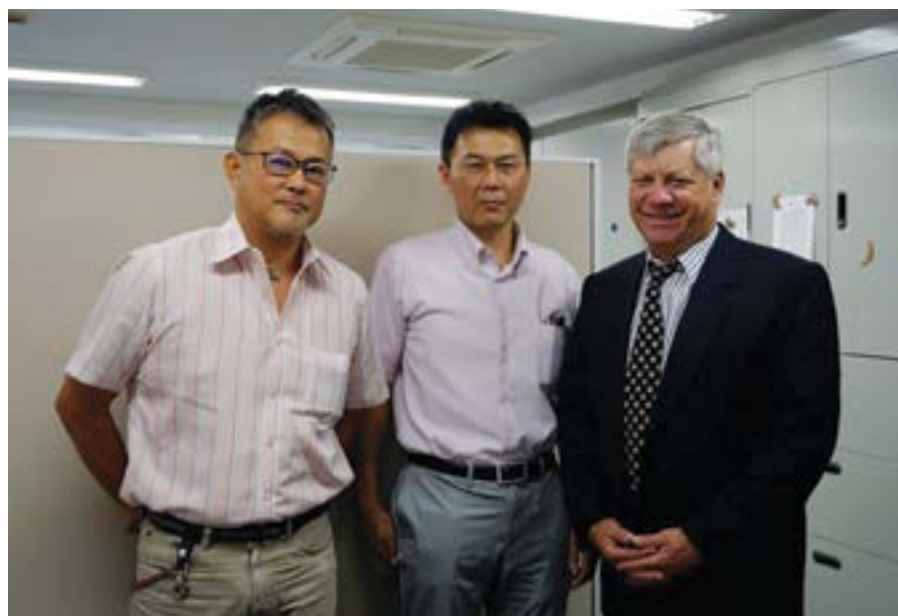
Nikke

We then had a meeting with President and Chief Executive Officer of NIKKE The Japan Wool Textile Co Ltd, Kazuya Tomita and Director and Managing Executive Officer, Sadatoshi Shimazu, at their head office. Nikke is a one-billion-dollar business which respects our product and believes that our price has to be reasonable and is considering becoming a member. We had a very positive second meeting with President of NIKKE Fabric Co Ltd, Yugo Morita and the Yarn Sales Group Manager Sonic, Sonosuke Terasawa.

A project ASWGA member Helen Cathles witnessed was a Nararagawa product, which has been completed with 19.5-micron jumpers and will on sale in Italy in mid-2018. Nikke produces undergarments



Mihoko Aoki, ASWGA Life member Mike Kuritani, Danny and Megan Picker



Senior Managing Director Fumi Nakagawa alongside Danny Picker at Atoms & co.

from 17.5-micron and is very aware of next-to-skin wear and highlighted advantages of sleeping in woollen products. They are considering contracts with ASWGA growers of 17.5-micron wool and would like to do a trial to check quality; their better tops come from Schneider. Nikke will contact Motohiro about members' wool for a trial and will offer contracts for 12,000 kg clean, about 100 greasy bales through Motohiro. They want better quality for higher market clients

as a special project. Knitting yarn is 17.5 and 19.5-micron. They are currently selling only 17.5-micron yarn domestically, but are looking overseas. Nikke uses 4,000 to 5,000 tonnes of greasy wool per year. They currently believe the 18 to 22-micron price is too high, as they can't compete with China. Nikke also has questions about the usage of mulesed wool in their garments from Italy. Nikke is worried about the security of quantity and the price; their products have

stayed the same price for the last three years. Consumers will spend USD \$600 to USD \$700 on school uniforms (Armani 22-micron product), but struggle to spend money on themselves.

Toa Boshoku (Toabo) - Member

We met with General Manager Satoshi Yamada, Director Chairman Yoshi Mizumori, Shigeyoshi "Stuart" Tanaka and the General Manager of Engineering Masaharu Kamei. Yoshi Mizumori worked at the Goulburn Wool Scour for three and a half years about 25 years ago.

Toabo's first concern is cost of raw wool - quality is second. Toabo has merged with Miyuki and is under some re-structuring. I expressed how important they are as a mill member to Australian wool growers. They have a Chinese venture and a new factory in Vietnam, spinning and finishing with 21 to 22-micron wool and they are a big user of polyester. Their clients use 80 tonnes greasy of 17 to 19-micron. They wish to promote next-to-skin wear using ASWGA members' wool. One main product is sports wool for hiking, 18.5 to 19.5-micron; they believe the micron is getting too high which is causing some skin irritation, but cost is the factor. They are also producing 18.5 to 19.5-micron t-shirts for a luxury brand, which sell at about USD \$130 retail and are



Sadatashi Shimazu, Director and Managing Executive Officer. (Left) Kazuya Tomita, President and Chief Executive Officer., Danny & Megan Picker, Tetsuya Motohiro & Shigeki Tobe at Nikke



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blended with cotton and polyester. Toabo is very interested in babies' wear and woollen socks, which are a growing part of their business.

Otsu Keori

We met with Executive Director T Shimomura, and Y. Kitayama, from Otsu Keori, a possible new mill member. Mr Shimomura actually purchased some 14.5-micron top from Motohiro while talking. Otsu blends 30 to 40% of fleece with carding wools to manufacture garments. They use 300 tons of 17.5 micron wool tops a year, using both fleece and carding wools for blends with other fibres. They recently purchased 10 tonnes of greasy wool of 14.5-micron from AME - selling 100% of 14.5-micron woollen jumpers to a top retailer in Japan, which retail between USD \$200 - USD \$300.

Stylem

Met with Textile Material Manager Takeshi Hara and Hiroaki Miyoshi and Toshiro Yamauchi, from Business Headquarters of Stylem's Textile Material division. Stylem is a two-billion-dollar trading company, trading textile, material and garments, using natural fibres, cotton and synthetics. They buy 20 – 22-micron tops from Motohiro and 17.5-micron tops from Schneider. I explained about next-to-skin wear and babies' wear to them, but they were well aware of the advantages of superfine wool in these products. We need to advertise more about the next-to-skin benefits. I explained our members were nearly all under 18.5-micron, with curvatures above 70% per mm. They are interested in our members' wool if they can blend with other fibres. I explained that wool was best on its own.

Itochu - Member

Met with Mihoko Aoki from Itochu CI Textile Service Co Ltd and Jumbuck Japan Co-corporation's Mike Kuritani. Mike now works as a contractor to Itochu, dealing solely with Chris Kelly, AME. Itochu has their own business from greasy to finished garment, using wool from 14 to 19-micron. Their product is of genuine quality and they try to use the best wools available and have their own shops in Japan selling sports wool, t-shirts, blends and suits. They are a big buyer of lambswool, especially from ASWGA members, using the ASWGA Logo on their swing tags.

Wool prices should hold up for at least another twelve months. Low-quality t-shirts sell for between USD \$100 to USD \$150, but theirs' are better quality and sell in the USA for USD \$200 because of the quality and being made in Japan. China is buying 80% of the wool market, blending wools and causing concern in greasy pricing. The

main factor is the exchange rate in currency between USA and China has stayed the same since around 2011. Woollen products are also selling well because 250 million people in China are middle class and think wool is a luxury item. Mike has extensive knowledge on everything within the woollen industry, hence we couldn't give him much news.

At this stage, Japanese manufacturers are very interested in Australian wool, especially ASWGA Members' wool.

Atoms

Met with Atoms' President, H. Kita and Senior Managing Director, Fumi Nakagawa. They have current ASWGA clients, 14.5 to 15-micron for five to six years, mainly from Tasmanian and Victorian Wool Growers

dealing with Ted Wilson of Landmark. Products are mainly jumpers, cardigans and other knitting products.. Japan was a major buyer of greasy wool in the mid-1980s, about 30%, now only 1%.

They buy approximately 100 tonnes a month of greasy wool, 17 to 30-micron. They believe that young people don't care about wool, just colour-softness and brand - a barrier which needs to be overcome as youth believe that woollen products are too costly. Atoms' main micron are 20 to 24, supplying tops to spinners and weavers for school uniforms. The recent rise in greasy price for wool may have another 200 or 300 left in the rise. They are waiting for a price reduction before major buying of greasy wool. They deal only with natural fibres, mainly wool.



Taka Saito, Tetsuya Motohiro & Shigeiki (Sean) Tobe



Danny Picker with President Tetsuya Motohiro & Shigeiki Tobe at Motohiro

They would like to see a scour and top-making plant in Australia. Wool would be easier to promote if traceability was in Australia. Their customers could promote products more if wool was only produced and manufactured in Australia and Japan. It would cut costs for Japanese if wool could

by-pass Italy and China for production. This would allow the Japanese to purchase smaller quantities, when needed, from a top-making plant in Australia. Atoms would be interested to help set up a mill.

We need to promote woollen products outside the wool industry; the general public

knows next to nothing about the benefits of wool for next-to-skin and babies' benefits. Sports wool is beneficial for next-to-skin wear.

Summary

The Japanese people are very gracious and respectful. I can't thank Motohiro enough, especially Sean for the planning of meetings and help during our visit. His friendship and caring for Meg and myself was second to none.

The only reason ASWGA members will not do business with Japanese mills is if we don't try to supply wool when contracts are offered. Offers will come through Tim Marwedel (Schneider) and Shigeki (Sean) Tobe (Motohiro). I believe a bonus in price is possible, especially in lambswool and cardings.

All businesses were very appreciative of our visit. Japan only buys 1% of Australian greasy wool, compared with China at around 80%. It appears Japan are aiming their market at 70 to 80% carding wools, with a massive interest in lambswool.

Danny Picker
President



Yugo Morito, Sonic Sonosuke Terasawa.

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Photo: Tour of Talaheni

GOULBURN YASS DINNER & FARM TOUR 2018

My partner, Neil Carey and I, plus Peter, Neil's brother, run ultrafine Saxon merinos in the Wee Jasper Valley, near Yass NSW in a mix of leased and owned country. This was my first ASWGA conference.

In the early evening of the Friday, members and guests gathered for canapes and drinks prior to dinner in the motel restaurant. A great chance for conference growers to meet some very experienced wool growers and meet experts like Dr Peter Morgan. People travelled from as far afield as Tasmania and Western Australia.

On Saturday, members and guests then travelled from the shadow of the Goulburn Big Merino (some by charter bus) to Danny and Megan Picker's "Hillcreston Park" at Bigga - for a day of numerous talks and displays, plus inspecting the operation and viewing stud sires and progeny. The speakers included Jane Littlejohn from AWI and Nicholas Shortis of Troy Laboratories regarding the very "topical" lamb sedation, Buccalgesic. Other speakers were Paul Vallely from Growers Call, discussing the supply of traditional superfine wool; Roland Gill from Loro Piana, discussing their contracts; Murray Bragg from New England Wool with Barberis Q&A; Mark Hedley of AWN with market intelligence and Alistair Calvert

from Wool Solutions and Charles Coventry of Achill Pastoral speaking on behalf of AgEDGE.

After a hearty lunch, endless cups of tea and coffee, side sampling demonstrations, woollen products from Bellevue Park and AWI innovative products, people returned to Goulburn to put on their glad rags for the conference reunion dinner and Fleece Competition Presentations.

Under the direction of Emo Parsonson, the night's MC, delegates were welcomed

by our National President Danny Picker. Special guests were Natsun Group Executive Song Jianmin (Jeremy Song) and Kevin Xing and Marco Schneider from Schneiders SA. Presentations were made to our new mill members, Bendigo Woollen Mill and G. Schneiders SA and welcomed to the ASWGA family. The meal was delicious and included a wool/sheep trivia game put together by Robyn Ive from the Southern Tablelands Region and ably and humorously conducted by Emo.



Dinner was held at the Mercure Goulburn



Mary Goodacre of Sheep CRC explains the ASKBILL app to guests



Nicholas Shortis with Simon Cameron and Charles Coventry



Event speakers Nicholas Shortis, Janet Bell, Murray Bragg, Jane Littlejohn, Alistair Calvert, Mark Hedley, Roland Gill and Charles Coventry

The winners of the ASWGA Fleece Competition (sponsored by Bendigo Woollen Mills) were Mark & Lesleann Waters of "Riverton" from the New England region, who presented an impressive fleece that was very worthy of the award.

Diners retired to their rooms at varying stages of the night, having had a delightful time with some new-found friends.

On the Sunday, delegates travelled to John and Robyn Ive of "Talaheni" at Murrumbateman, to view their property that has undergone a transformation over a thirty-year period from salinity and soil degradation, to a productive and environmentally sustainable farm. I am sure all came away with many new ideas and a tummy full of Robyn's heart-warming soups. Mary Goodacre, a Sheep CRC representative presented the "AskBill" computer program to assist growers in predicting and managing their farm business in respect to soils and rainfall. Trent Fordham of Riverina Wool Testers also presented an interesting talk.



This event would not have been possible without the generous support of our Platinum sponsor Australian Wool Network, Silver sponsors Australian Wool Testing Authority, Riverina Wool Testers and Techwool Trading, along with Australian Wool Exchange, New England Wool, Australian Merino Exports, Schute Bell Badgery Lumby, G. Schneider Australia, Arcadian Wool Brokers, Rabobank and Vitale Barberis Canonico. Thank you to all our supporters and attendees for making this another wonderful success for the Australian Superfine Wool Growers' Association.



ASWGA Members and guests visiting Talaheni



Robyn Clubb representing sponsors AWEX, with Dr Peter Morgan ASWGA Public Officer and honorary Life Members with Greg Andrews representing sponsors Schute Bell Badgery Lumby








Special guests from Natsun Kevin Xing and Jeremy Song with Danny Picker (centre)



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Ethical Growers of Luxury Merino



Photo courtesy of VCLuxe

55TH ERMENEGILDO ZEGNA WOOL TROPHY

Since 1963, the Ermenegildo Zegna Superfine Wool Trophy has honoured Australia's best wool growers. This competition is today, the oldest in the world of wool.

The Vellus Aureum (Golden Fleece) Trophy was added in 2002, to celebrate the incredible advances made by Australian woolgrowers and to reward the absolute

finest wool fleece produced every year. In 2016, the finest and best fleece was recorded at an exceptional 9.9 micron, making it a still unbeaten world record.

The 2018 edition marked a significant increase in the number of farms participating in the trophy: 56 farms in 2018 vs 39 farms in 2017.

The 2018 Superfine Wool Trophy was won by David and Angie Waters ("Tarrangower" Merinos - Hillgrove, NSW), with Allan and Carolyn Phillips ("Glen Stuart" – Deddington, Tasmania) and Ed and Jill Hundy ("Windradeen" Mudgee - Pyramul, NSW) taking 2nd and 3rd place, respectively.

The winners, David and Angie Waters took first place for the second year in a row, while the Phillips and Hundy families have been among the winners for the last six editions.

"Mulgowan" (Amiens-QLD), "Gowrie" (Guyra-NSW), "Wildford" (Tenterden-NSW) were for the first time in the final ranking.

"We were absolutely thrilled to win the Ermenegildo Zegna Wool Trophy again this year. We are really passionate about what we do and it is an honour to be recognised for our commitment to producing the highest quality product two years in a row.

As for the 2019 competition, we take absolutely nothing for granted and won't be changing our focus, but we understand that there is a huge calibre of expertise and extremely high quality wool clips in our end of the wool industry. The increasing challenges with the variables associated with the current drought in wool growing regions



Pictured: Paolo Zegna with Wool Trophy winners David & Angie Waters of "Tarrangower" (photo courtesy of VCLuxe)

could really open the competition up.

Zegna is such a great supporter of the Australian superfine industry and we are proud to have this association with them. Good luck to everyone” David & Angie Waters said.

The winners of the Vellus Aureum Trophy were Ross and Rebecca Blake from “Allandale”-Walcha NSW. David and Susan Rowbottom from “Rowensville” – St. Helens VIC and Mrs. Annie Hutchinson from “Kentucky Station”- Kentucky NSW were, respectively, 2nd and 3rd in the competition.

“We would like to thank Paolo, Gildo and the Ermenegildo Zegna company for their continued support of ASWGA and woolgrowers. When speaking with Paolo, it is clear to see the passion they have for wool and especially traditional wool. It is also clear the enthusiasm for the process of turning this wool into fashionable high end fabrics and clothes. As ultrafine growers, we need companies willing and wanting to invest in processing our wool. It is pleasing for us that the Vellus Aureum now has a bigger focus on all the other characteristics of a good fleece as well as micron. We would like to encourage all growers with wool suitable to enter, as it is a very rewarding experience.” Ross & Rebecca Blake said.

To further strengthen the relationship with the best wool growers, starting from the

new 2019 edition of the Superfine Wool Trophy, Ermenegildo Zegna has decided, in addition of buying all the participating ten winning wool lots with a 50% premium over the market price, to also commit to buy from them a total of 100 bales shorn in the following 2019-2020 season, at the market

price plus a 25% premium.

The new rules reflect the same criteria upon which the Company has based its entire history, generation after generation - to buy the best quality wool and properly reward the excellent hard work of the woolgrowers.

For a copy of the 2019 rules, contact the Australian Superfine Wool Growers' Association (attention Melissa Mulley Melissa.Mulley@woolindustries.org), directly to Ermenegildo Zegna (attention Sara Tacchini sara.tacchini@zegna.com) or visit <https://www.aswga.com/competitions>



Pictured: Paolo Zegna with Vellus Aureum winners Ross & Rebecca Blake of Allandale (photo courtesy of VCLuxe)

SUPERFINE WOMEN

In the past the Annual has concentrated on the sheep, mills and the male head of the farming enterprise.

A quote

“Behind every great man there is a woman”

Yet women have often been the backbone of the wool industry, from Eliza Forlong, who twice walked Saxony, buying sheep to be shipped to Tasmania (2013/14 annual). While Mrs Elizabeth McArthur kept the fledgling sheep flock on track during husband John’s many absences in England.

ASWGA have had their first female federal president in Helen Cathles (2012-13) while Brenda McGahan was CEO of Australian Country Spinners (2012-2017) the first Australian mill member, working to develop the Superfine knitting yarn.

The trails of farm life from a woman’s perspective have been written about in Australian fiction, from Lucy Walker, to today’s modern Australian women authors, Rachael Treasure, Nicol Alexander and numerous others. True life tales with writer’s licences are recorded in Christina Hindhaugh “I Love a Sunburnt Torso” and Fran Cleland’s columns in rural papers, written from Sam the Ram’s view point.

We have Women on Farm Gatherings in most states of Australia, (Victoria will host the 30th in 2019), and Museums Victoria houses all memorabilia from the gatherings, plus at present, supports two PhD students to research rural farming women. Australian Women in Agriculture (AWiA) works with all states and federal governments. In 1994, the legal status of women in agriculture was changed to that of “farmers” (in 1995, the Australian government established a Rural Women’s Unit in its agricultural department*). The

Country Women’s Association has been part of the landscape for many years, working locally and with governments. Victoria has a Network website taking over from its forerunner quarterly magazine to keep rural communities via the women in touch. Farmer Health this year launched the Invisible Farmer series of short stories on their website one of AWiA projects. Museums Victoria is also running its own Invisible Farmer program.

So part of the annual this year, and hopefully in following years, will feature women either as part of the farming enterprise, or in a member mill position. I hope that the stories of those featured this year will encourage other members to record their story to show overseas and young members. We also encourage overseas members share their experiences.

*<http://www.futuredirections.org.au/publication/empowering-women-in-agriculture-australia-and-beyond/>

CAROL PHILLIPS “GLEN STUART”, DEDDINGTON, TASMANIA

I was born in the Netherlands and emigrated to Australia with my parents and siblings. We lived in three different states as my father furthered his career and my mother also worked part time.

My knowledge of wool and sheep when I first met Allan was non-existent – in fact we didn’t even eat lamb when I was young.

Marrying into a farming family as a pure novice was always going to require a steep learning curve – but luckily, I had a great mentor.

My first memory of handling wool was picking lambswool in the Currawong woolshed on a very hot January day. This was a family affair and I was encouraged to help, starting my love for this amazing fibre.

I married Allan, and we lived at Rivernook, in Tatyoon for ten years, during which time our

three daughters, Jessica, Rebecca and Meg, were born. We remained within the family partnership, for the first nine years of our marriage, and experienced interest rates of 16%, dry years, and the collapse of the wool floor price.

Fortunately, as a Registered Nurse, I was able to work part-time to supplement our income, and I assisted on the farm when I could.

However, it was after our move to Tasmania, to follow our passion for growing superfine wool, that I took a much larger role in the day-to-day farm jobs. With a young family, we had taken a big leap of faith moving to Tasmania and needed to save money wherever we could.

My role in the farm has been very varied and has depended on wool prices and circumstance. Early in our time here, I would

work part-time off farm, but help as much as possible, including working on the table during shearing. We had a young family, and would involve them as much as possible, especially when mustering sheep or bush fencing.

When the wool prices were low, I was able to increase my work off farm, to full time, and help on weekends. This left much of the farm load to Allan.

In the past two years I have been home on the farm full-time, and have enjoyed working alongside Allan, without rushing off to school buses, or other work commitments.

We manage the farm together, sharing the decision making, and each of us works to our strength and expertise.

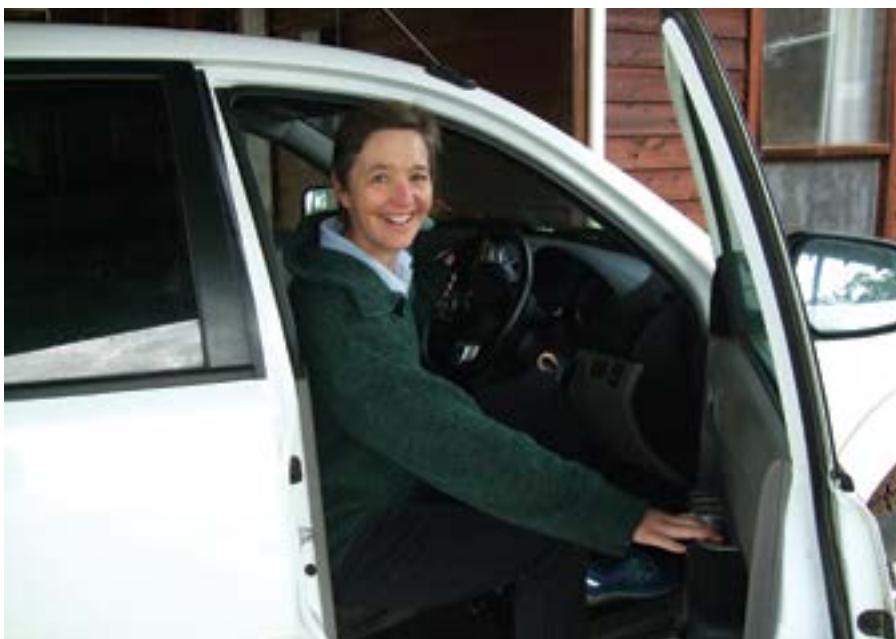
The only time I can honestly say I have been ignored as being a partner in the farm, is by our farm dogs. Many a time, one of the dogs has looked at me with a funny expression, almost saying “it’s OK, the boss and I have got this, you don’t need to tell me what to do”.

Luckily, we now have Bella, our kelpie, whose desire to work overrides loyalty - and provided Allan is nowhere to be seen, will work for me.

In the last thirty years, farming has certainly changed somewhat, with advances in technology and breeding measurements. However, our operation still revolves around hands-on management and focus on quality.

We have come across many challenges, but these are overshadowed by the many highlights we have experienced along the way. By far the most rewarding part of being in this industry, is the many people we have met and the friends we have made.

I am fortunate to be involved in this industry, living in a beautiful location, and doing what I love.



Carol Phillips

PENNY HUNDY, WINDRADEEN, MUDGEES

Daughter to Maria and Robbie Parkins, I am the second youngest of five children. Along with my two brothers and two sisters, I enjoyed a simple upbringing on a rural property between Gulgong and Dunedoo, NSW. Majority of our school holidays were spent helping on the farm, with the occasional camping and fishing trip up North.

Having first met in 2001 through a mutual friend, I married Andrew Hundy in 2002.

Sixteen years later we are now a family of five and are the proud parents of Gus (14), Sarah (11) and Charlie (5).

My schooling was completed in Gulgong, with my favourite subjects being Maths, Economics and Agriculture. Straight out of school whilst waiting for my HSC result, I worked at a local vineyard training and pruning young vines. I thoroughly enjoyed the few months I worked at the vineyard;

I loved working outside and meeting new people.

Although I wanted to continue my education, I was reluctant to take on fulltime study straight after a stressful Year 12. I began part time study by distance education through Charles Sturt University, whilst gaining full time employment at an environmental laboratory in Mudgee. Although this allowed me to gain experience and earn an income,

unfortunately it also turned a four year degree into eight years.

I continued living at home with my parents during this time – mum’s home-cooked meals made the daily 1.5-hour commute well worthwhile! I progressed through my degree and finally worked my way to Quality Manager Position at the laboratory.

Having completed the majority of my degree between the hours of 9pm and 1am, I finally finished my Bachelor of Business Management in 2008. I attended my graduation ceremony at Charles Sturt University, Wagga Wagga with my parents, husband and two children in tow.

Having been raised on a sheep and cattle property, I had a level of farming experience before moving to ‘Windradeen’. Medium wool sheep were run on my parent’s property and although many husbandry practices are common across all types of sheep, I soon realised the handling and preparation of superfine wool was very different from what I was used to. It didn’t take long before I realised a quick ‘around the edge and throw it in’ method was not going to cut it in the ‘Windradeen’ woolshed.

The experience I gained from my role as Quality Manager at the laboratory became more useful than I would have previously

thought. Operating an agricultural enterprise involves an increasingly high amount of traceability and accountability. The Livestock Production Assurance system demands a high level quality system across all areas of production.

My contribution to our farming enterprises (superfine wool, fat lambs and cattle) is wide and varied. Although I don’t put in as many hours as Andrew on the farm, I still consider I earn my keep. A large amount of bookwork is now required (accounts, BAS lodgement, LPA requirements etc.), along with on-farm jobs (which I prefer), including feeding stock, weed spraying, fencing, shed work at crutching and shearing and other animal husbandry tasks.

As with almost everything, there are both positives and negatives to farming life. On the negative side, it can be a tough gig battling the elements, feeding animals during drought conditions as we are now, never catching up on all jobs and regularly having plans changed at the last minute due to some farm emergency. Having an income which cannot be accurately predicted can make business decisions challenging.

Constantly being a ‘price taker’ is another downside to farming. As a farmer you are at the mercy of not only your suppliers, but also the buyers of your product. In both

situations you are the ‘price taker’ and never the ‘price setter’.

However, on a positive note, I love how our occupation provides us with not only an income, but a great way of life and a wonderful environment to raise our children. Many special memories are created on a farm – it is amazing how a fire, sausages, bread and a bag of marshmallows can turn a hard day working up in the paddock into an enjoyable experience for our family.

Outside of the farm, I enjoy being involved in our children’s activities – swimming lessons, music lessons and tennis lessons, keep me busy one afternoon a week. Some activities I do for me – I have recently started attending (and really enjoying) Pilates classes on my town day. I also enjoy helping out with Meals On Wheels, which allows me to visit different areas (I especially like the out-of-town runs) and meet a variety of people.

When motivated, I love knitting beanies (I can only knit beanies) and I use Australian Superfine Merino by Cleckheaton – a simply beautiful product to work with; I can highly recommend it! Having recently attended Women In Ag Day, operated by the Local Land Services, I am keen to be involved in future workshops offered to the group.

There are many innovations I have witnessed during my time being involved in agriculture



Penny Hundy

(which would be a small amount of time compared to many). From the old Ajax wool press my parents once battled with, where my sibling and I were the wool stampers and the weight of the bale was initially gauged by how tight the bale felt, through to the electric/hydraulic wool press we have today, which is complete with inbuilt scales. Accounting software has improved out of sight and the introduction of pneumatic fencing equipment has been a great innovation.

Further innovations in the area of recordkeeping would be most welcomed. Although a few programs are now available, I have struggled to find a good app which allows for easy record keeping across all areas of our business – drenching, spraying, livestock records etc.

Although automation tends to be the key to progress in any industry, I think there will always be a large ‘human element’ required in farming. Breeding programs, drenching, crutching, marking, shearing, wool handling and classing will always demand a high labour input. I believe on-farm traceability

through thorough record keeping will continue to increase in importance.

Whilst we would love for our children to continue working ‘Windradeen’, we will encourage them to seek further skills and education outside of farming. Whilst farming can be a great occupation, it can also be a difficult one which relies heavily on your physical fitness. Equipping yourself with additional skills can not only help in the running of the farming operation, but it expands options into the future.

I have contact with many males in the operating of our business. Whether it is rural supplies, stock agents, wool agents, stock carriers etc, I generally don’t feel my gender has influenced the way I have been treated. That is not to say the situation was not very different for my mother and grandmother’s generations.

I believe there is now a widespread acceptance of women in many non-traditional occupations, including agriculture. A shift in the mindset of people, when it comes to women in agriculture, has been an area where massive progress has been made.

The days where women are exclusively homemakers, in charge of running the household, cooking, cleaning, taking care of children etc are long gone (thank goodness!). Specific gender role divisions no longer exist. Andrew and I both work on the farm, and we both help with the housework (although I haven’t got him ironing yet).

More and more women are filling positions in wool sheds – rouseabouts, wool preparation and classing, are all commonly done well by women. Having said that, I do believe males are still safe in the industry. Whilst I don’t necessarily consider myself a feminist, I do have faith in women and the contribution they make. I also consider many jobs (including shearing) are more physically suited to males.

Whilst a healthy combination of both males and females working within the wool industry will result in the most successful outcome, I believe the percentage of women working in the industry will continue to rise in the future as the essential element women add is realised across the industry.

VERA TAYLOR, WINTON, TASMANIA

Women on the land have always had an important role from the very early settlement days, although this involvement was initially low profile, and it has been recognised more in later years, including the contribution of Elizabeth Macarthur.

My own forebears and the family into which I have married - all with a country background - have much to be proud of, as have many generations of women.

From the early 1820s, women who settled with their families in remote areas were simply amazing. Imagine how they travelled, how they settled on bare land, how they helped create a home in which to live with so few comforts.

In this account, I acknowledge the role of the Taylor women who supported and worked alongside their husbands. When bushrangers attacked the family in 1826, it was the Taylor women who loaded the rifles to help fend off and capture the intruders.

History tells us the story of wool in the Macquarie Valley. It began in the 1820s, when the Taylor women, like all country women, were there, learning and listening and were involved. It still happens today.

We know of the courageous woman Eliza Forlong, who was an exception in the story of women and wool. We in the 21st century

can only be amazed by her determination and enduring love for her children. She was confident and had faith in the future of wool.

Women on the land still have the same profound determination and commitment.

Recognition of country women was mostly never expected, nor needed by them. This was the way it was. Situations varied of course. When women chose to live on the land, their role was mostly as the homemaker, to rear their children and provide support to their families. My mother-in-law fitted this beautifully and I don’t think she, or her contemporaries, and those before her would have changed any of that.

For most women, it has been a personal choice how they fitted into farm life. There have been numerous women who have excelled and been recognised, often through their knowledge and education, but also with encouragement from their families.

In my case, I went to Winton from a farm background - my mother, herself a country girl, was very much a part of the day-to-day running of the farm. I arrived in the mid 1970s, a time of change for women worldwide. It seemed a natural transition to become part of the management team for me. It was becoming popular to be involved outside the home with hands-on

activities. It wasn’t unusual for many of my contemporaries to keep their own career pursuits often off-farm after they married. It was accepted and in some cases expected.

Initially, it was different for me, there was a team of men employed on the property, I was only accustomed to a Jackaroo. National shearing contractors at the time did not welcome women in the male-dominated woolshed. Over the years this changed and I always loved a job especially working with wool and sheep.

I was always encouraged to follow my dreams. I embraced the history of the property and the community. I set up an 1835 cottage for bed & breakfast accommodation, I ran garden tours in the old 1.2 ha homestead garden on the property and shared the story of the family, the sheep and wool with people from all around the world. I was able to join many community groups and found my way on to several committees which often revolved around sheep and wool. Best of all, I was available to help on the farm any time and also to support our children through their various activities.

Our time at “Winton” has been very much a family affair; our children have always been involved and they developed an understanding of wool production and

followed it to retail. Those before us could have only dreamed of that.

The opportunity of direct contracts has opened so many doors and has enabled individual wool producers to feel so much more involved in the whole chain of wool production. This has been positive and rewarding.

We have been privileged to travel, representing various bodies all revolving around wool, we have met wonderful people all around Australia and the world; we have welcomed many to our farm, all interested in wool.

It is wonderful to look back now. We managed to work through some very different times. Boom times and tough times, droughts and floods, good prices and devastating prices, it has happened before us and no doubt there will be challenging times ahead. Our situation is generational - we have had our turn to run the property and now offer the same to the next generation.

Will wool prevail? I have great faith in wool's future. It is a matter of continuing promotion and telling the world how superb this fabric is. It will always remain a part of our lives.

My generation has grown up with change - now equality and inclusiveness is encouraged. Acknowledgement was never sought or expected.

I admire and support women who take leadership roles, or who work hard on farms

physically and if they enjoy it and are happy, that is all that matters.

I personally wouldn't change anything. It has been a privilege to be part of the team.



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THE AUSTRALIAN YARN COMPANY

The Australian Yarn Company was formed in October 2017, when the owner of Bendigo Woollen Mills - Colin Walker purchased Australian Country Spinners, the company famously known for the Australian and New Zealand brands of Patons, Cleckheaton, Shepherd, and Panda. The acquisition of Australian Country Spinners has ensured

that the future of iconic yarns such as Totem, Bluebell, and hopefully soon-to-be iconic brand Australian Superfine Merino, remain as truly Australian Made products, with the manufacturing of the brands based in The Australian Yarn Company's two associated mills - Wangaratta Woollen Mills and Bendigo Woollen Mills.

Between Wangaratta Woollen Mills and Bendigo Woollen Mills, there are over one hundred years' experience in the manufacturing and distribution of all types of different yarns and fibres, with many of the staff having worked there for decades - including Colin Walker himself, who began his life's work in the manufacturing of yarn at Wangaratta Woollen Mills as a young man, before forming Bendigo Woollen Mills in 1984. Mr Walker's passion and dedication to the industry are matched only by that of the Australian Superfine Wool Growers' Association, its members, and the staff across both Wangaratta Woollen Mills and Bendigo Woollen Mills.

In 2018, The Australian Yarn Company was granted the honour of presenting the Champion Fleece trophy, due to the work we continue to do in producing the Australian Superfine Merino yarn range under



Danny Picker & Colin Walker at Wangaratta Woollen Mills



Bendigo Woollen Mills

the Cleckheaton brand. The Australian Superfine Merino yarn range was launched in 2013, with thirty colours and a handful of pattern designs. Now with 34 colours and 46 patterns, specifically designed for the Australian Superfine Merino yarn, the range is growing in popularity every year, and may soon be the new iconic yarn grown and produced in Australia. We are incredibly grateful for the expertise and support of the ASWGA and its members as we continue the production of the range.

It is The Australian Yarn Company's hope to continue working with ASWGA and the Australian wool industry to expand the range of natural fibre yarns and colours offered under the Cleckheaton, Patons, Shepherd, Panda and Heirloom brands, and to build upon their past successes. We are all passionate about the wool industry and the people who keep it alive and, as such, we will never stop spinning in Australia and will continue to support the Australian wool industry.

The Australian Yarn Company can be actively found on Facebook as The Australian Yarn Company, and on Instagram as ausyarnco. We love to see what our customers are doing with our products and would, in turn, love to connect them with ASWGA and its members. You can contact us through one of our social media platforms, or alternatively, email socialmedia@ausyarnco.com.au.



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*Photographer: Matthew Linke - Elders Client for over 40 years
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Live it.

WE ARE IN THIS TOGETHER

G. SCHNEIDER SA JOINS ASWGA

In the beginning of 2018, G. Schneider SA joined ASWGA as a mill member with the goal of being more closely connected with Australian Superfine Wool Growers. The Sydney-based buying office is part of the Schneider Group, a household name in the trade of fine wool tops.

Having a close connection with Australian Growers has always been part of the family business' DNA. Already in 1922, Giovanni Schneider, the founder of the company, came to Australia to start his wool trading business. Today the Schneider Group is led by second and third generation and operates four combing mills in Italy, Egypt, China and Argentina.

The destiny of wool growers and topmakers is closely aligned

The role of the topmaker in the supply chain regarding traceability and provenance has become dramatically more important in recent years. "As fewer topmakers exist within the industry today, particularly in Europe, we feel it's our duty and obligation to partner with the best Superfine woolgrowers as a member of ASWGA", says Marco Schneider, son of the company's founder and father to current CEO Giovanni Schneider. "We need to cooperate and communicate efficiently with the growers and it feels logical that we join ASWGA

as an overseas mill member. ASWGA is a famous association and we are proud to have received our membership at the recent ASWGA annual reunion and fleece competition awards dinner in Goulburn."

A need to connect

Re-nurturing the connection between growers and the topmaker is even more vital for both players in the wool supply chain, as more and more end users are asking for provenance and quality assurance. "Spinners, weavers and retailers are looking for ways to tell the story of their wool products. However, tracing the values down the supply chain often remains a challenge. As a large wool buyer, exporter and topmaker we believe the Schneider Group has a unique role in offering a transparent supply chain, which is why we established our integrity scheme called Authentico," says Giovanni Schneider, CEO of The Schneider Group.

Introducing Authentico

Authentico is a new integrity code established by The Schneider Group. Authentico ensures a transparent supply chain from the farm gate of Authentico certified wool growers to the delivery of wool tops to customers of The Schneider Group.

Authentico makes use of existing standards, best practices and legislation in the domain of animal welfare, quality assurance and environmental care. "Authentico is a summary of the great work already

being done on farm," summarises Tim Marwedel, Managing Director of G. Schneider Australia. For example, the integrity scheme asks for the completion of the National Wool Declaration, use of pre-operative anaesthetic, ceased mulesing or non-mulesing.

Fully traceable

Authentico licensed wool clips will be listed in the catalogue and are available for sale at auction. Any Authentico wool purchased by the Schneider Group will be exported and scoured and combed into wool tops for sale to spinners, weavers and retailers. During this entire process, the wool is fully traceable back to its origin.

Focus not only on-farm

In addition to on-farm best practice, The Schneider Group also works on minimising its own environmental impact of transportation and processing within its own supply chain. The Schneider Group will provide details on CO2 emissions, chemical usage and water consumption for each Authentico lot.

We are in this together

In order for wool to be successful, it is the connection and dialogue like the one between ASWGA grower members and the Schneider Group which are important as everyone is in this together. With the ASWGA membership as well as with Authentico, the Schneider Group hopes to contribute to a successful future of all ASWGA members.



Pictured, Marco Schneider receiving his membership certificate at the recent ASWGA Dinner

About the Schneider Group

The Schneider Group is a 100% family-owned company with wool scouring and topmaking plants in Italy, Egypt, China and Argentina. The four mills process over 18,500 tonnes of wool each year and employs over 600 staff. Most superfine wool is processed in the Biella-based mill, Pettinatura di Verrone, where the average fineness is 17.5 micron with a capacity to process as fine as 10 micron merino wool. In addition, the group operates wool and speciality fibre buying offices in all natural fibre producing countries including Australia and New Zealand. Two cashmere dehairing plants in Mongolia and Iran as well as a silk yarn business complete the Group's natural fibre offer. More information can be found at www.gschnaider.com.



TARRANGOWER MERINOS

Angie and I began working in the wool industry on our family farms from an early age. We were surrounded by passionate woolgrowers who still today challenge and encourage us, one of whom was the late Ross Tully, OAM - Angie's grandfather, who we greatly miss.

I classed the former Tarrangower clip of 150-200 bales for eight years for Angie's parents, when, in 2005 and still in our late 20s, we had the opportunity to purchase the Tarrangower Stud, including selected rams, ewes and commercial ewes and we began to use the wool brand IC/TARRANGOWER/NEW ENGLAND. Over the next twelve months, we relocated the Stud and sheep to "Eastview", Hillgrove, my family property which is situated 35km east of Armidale in the New England region of NSW. "Eastview" comprises of 568 ha and has a 50% balance of basalt and trap soils. Pastures are a mix of improved and fertilized native grasses. "Eastview" has an elevation of 1,000 m and sits on the eastern edge of the Great Dividing Range.

Our location does have its challenges with running sheep. Wild dog predation has always been an issue. Historically we would lose up to 100 sheep a year until, in 2011, we introduced Maremma Livestock Guardian dogs and since then we have lost less than a dozen animals to opportunistic attacks. The Maremmas not only protect sheep 24/7 from wild dogs, but foxes as well and have improved our lambing percentages. Now we would not run sheep without Maremmas.

Today the Tarrangower flock consists of approximately 2,000 sheep. We typically join 1,000 ewes and sell all wethers after their first shearing. Our aim is to produce productive sheep growing a stylish, soft, bright, white fleece, maintaining traditional 74-80's spinning quality with our adult fleece lines in the 15 to 16 micron range.

In the last few years we have adopted the use of electronic ear tags and collect individual fleece weight, micron and wool

line records at shearing. This is a very valuable tool, but subjective appraisal of wool, frame and confirmation still carry the highest emphasis when sheep classing.

In 2012, poll genetics were introduced into our breeding program, with the aim of breeding more robust, productive poll sheep that carry our traditional Saxon type fleece. We have continued with this and today, some of our most influential sires are polls and they make up 50% of the rams we breed and retain. Our ram clients also find they are producing positive results.

Shearing is completed early September, three weeks prior to lambing, to maximise the tensile strength of the clip. It is not uncommon to have an Nkt between 47 and 52 in main fleece lines. We employ only one very clean shearer and Angie, my father Noel and myself, all of whom are wool classers, prepare the clip to the highest standard. We class traditionally, removing backs, necks and hind legs from fleeces as needed.

Tarrangower Merinos' continued focus on wool quality and clip preparation has been reflected in our success in the Ermenegildo Zegna Wool Trophy competition. Angie and I first entered in 2014, where we won

the single fleece competition and placed third in 2015. In the inaugural whole bale competition, in 2017, we were so excited to be awarded first place. We were humbled to win again in 2018. Our winning bales were 15.0 & 15.6 micron, with other measurements almost identical; 0.5 VM, 76% yield, 80mm, 10 CoV and 49 Nkt.

We are so grateful that Ermenegildo Zegna show their support to the Superfine wool industry and it is such an honour to win this prestigious competition.

In November 2016, Angie and I were fortunate to represent young Australian Superfine woolgrowers and speak at the IWTO Round Table Conference in Biella, Italy, where we gave our perspective of the industry at the time. Zegna representatives also gave us a 'tour of a lifetime' around their mills culminating in their store in Milan. We thank ASWGA and Zegna for this incredible opportunity.

We look forward to continuing a positive relationship with ASWGA and are excited about the future growing this wonderful fibre.

David Waters



David & Angie Waters of Tarrangower Merinos



Photo of Lifetime Ewe Management group assessing pasture.

ARARAT-BARUNAH REGIONAL REPORT

The past year has been very enjoyable for the simple fact the wool market has been improving, a fact enjoyed by all members.

I congratulate many of our members who continue to exhibit in the Bendigo Sheep and Wool Show, many of whom have repeatedly had good success, showcasing our region. Congratulations must go to the Barty Family, for exhibiting the Victorian State Champion Fleece. Others to do well were the Kelsedale Stud, exhibiting the Champion Extra Ultrafine Fleece, Mt Chalicum, Kooringa and Avington. In the sheep exhibition, congratulations must go to Phil and Kim Hartwich for taking out the Most Successful Ultrafine Exhibitor and Grand Champion Ram and Ewe in Un-Housed Ultrafine. Craig Eagle for exhibiting Un-Housed Superfine. Noel and Lyndsey Henderson, for exhibiting Champion Ultrafine Poll for both ewe and ram. Also to the Barty Family, continuing to do well, exhibiting Reserve Champion Ultrafine Ewe.

During 2017, a Lifetime Ewe Management course was formed from members in our area. This has been an excellent initiative, with the course running approximately ten Months, with seven property visits,

following a mob of ewes from pre-joining to post-weaning. It covered topics including varying nutritional requirements, condition scoring, assessing food on offer in pasture and correct amount of supplementary feeding. The course has been enjoyed by all participants, to the point that they have continued to meet in 2018 to workshop aspects of their animal management, to seek improvement in their overall business.

Generally, across the Region, there were good spring rains leading to reasonable feed levels. Unfortunately, in some of the region, a severe frost in November impacted on the agricultural aspect of their business. We were very honoured to have Paolo Zegna visiting Ararat in the Spring, to promote and discuss his wool trophies. The meeting was well attended, covering a range of issues. It was very enjoyable to have such a healthy discussion and interest here in our region.

Spring moved into what turned out to be a very dry Summer, with very little rainfall in most of the Region for nearly four months. This led to a considerable amount of hand feeding of stock, which in some parts of the Region is still continuing. The Loro Piana Group visited Ararat in February, showing

interest in accessing the particular type of wool they require. It was pleasing to see a company with their reputation coming to Ararat to help ensure their supply. Hopefully this is reflective of the demand that lays ahead.

The Southern part of the Region enjoyed good rains from mid-April on, leading to reasonable growth of pasture to this point. In general, our Region has been very fortunate compared to others across Australia, highlighted by the recent trip to Goulburn to attend the Superfine Conference in May. We returned home feeling very grateful for the rain we had received, as many others in our Association have been less fortunate.

Congratulations must go to Noel and Lyndsey Henderson, Avington, for winning the Ararat section of the ASWGA Fleece Competition with an outstanding exhibit.

During this period, the wool market has continued to improve, which has been very enjoyable for those with wool to sell. The outlook is encouraging for the season ahead, as supply appears a real issue. The pleasing aspect is the demand for the fibre is driving the market, which is reassuring, as the quality and attributes of superfine wool are apparent and requested by consumers. This is helping, in some way, to repay faith in the wool we grow and continued breeding programs through what has been an arduous market for some period.

As we are now in mid-Winter, feed levels across the region are reasonable but that is all, with many areas still requiring hand feeding. As always, I remain hopeful that a good year lays ahead of us, both in market conditions and the rain that will fall. I would like to thank all those who have helped throughout the year, thanking Danny Picker very much, Simon Cameron, Melissa Mulley and Penny Hartwich in our Region.

Geoff Phillips



Photo of Lifetime Ewe Management group condition scoring

ALBURY-WODONGA REGIONAL REPORT

After a good rain in October last year, which came too late for spring growth in this area, we were essentially left short of feed going into summer. Sheep numbers were only maintained through feeding outsourced fodder and grain. Autumn lambing percentages could be reduced 20% because of losses associated with feeding lambing ewes.

Some members have used cross breeding to maintain cash flow during the period of low wool prices. I personally have been cross breeding Dohne for the last eight years. Now I have moved to breeding big polled fine wool 18-19 micron, for a better return from meat and wool.

It was unfortunate to see the demise of the Australian Country Spinners at Wangaratta, but I do believe the new purchaser has re-employed forty staff to do some processing again. Local knitters are delighted that the Mill Shop remains open, while visiting knitters from further afield regularly stock up as they travel through Wangaratta.

Ian and Margaret Humphry have resigned from being President and Secretary of the Albury-Wodonga Branch after fourteen years in those positions. We were a very active branch, with meetings held at Dinner Plains, Cassilis, Benambra, Springhurst, Wodonga, Beltana NSW, and members' homes, hotels, or wherever we could find a suitable room. Eventually it became more cost effective and suitable to hold our meetings around our extended dinner table at Springhurst.

In conjunction with Rob Harris from Wagga TAFE, our group took part in a four-day bus trip to the Western Districts, focusing on Ram Selection with a view to Superfine Production. We visited seven properties,

Hamilton Research Station and the Horsham Wool Factory. We also ran a successful course in Superfine Wool Classing and Production again with Rob Harris leading us.

The decline of our group occurred at the same time, due to the very long drought in the early 2000s, the advanced age and infirmity of many of our members, bushfires and the depressed prices for superfine wool. The region is very large, covering southern NSW, northern Victoria and Gippsland, with a mountain range in the middle, making it difficult for our members to meet.

Ian and I have continued in our positions to maintain a presence as a branch in our area. Now that superfine wool prices have increased, we are hopeful that there may be a resurgence. However many farms that were maintained as SF wool producers by the older generation, have changed their focus when the next generation took over.

With our reduced numbers the agenda became simplified to – meet and greet, eat and talk, reports from the Australian President ASWGA and ACS, followed by a general discussion by whomever was present.

During the last six years of low wool prices we have struggled to maintain our branch. It has only been with the support of Sue Housego and Brenda McGahan from ACS that we managed to keep going.

Now the baton has been handed to Jeff Gill of "Jemala" fame, who has taken on the position of President and Sue Housego our new Secretary. We do wish them, and all ASWGA members, well in the future.

Ian and Margaret Humphry



Photo: New Regional Chair Jeff Gill of Jemala, retired Chair Ian Humphry, National ASWGA President Danny Picker, newly appointed Secretary Susan Housego and Ian Gill of Jemala.

GOULBURN – YASS REGIONAL REPORT

Our region has been in drought for over twelve months in some areas - we are hoping for a change soon. The current cold conditions are putting stock under pressure, with paddock fodder in very short supply. Grain and hay prices have doubled from last year, which is eradicating any profit from current improved wool prices. Good rains and Spring won't come quickly enough for the Goulburn/Yass & Monaro regions, along with many other areas of Australia.

Early shearings vary, but in most areas, staple strength seems very strong, although yields will be under 70% in some areas. This is due to a lack of rain over the past twelve months. Vegetable fault should be very low this shearing.

Prices have risen considerably; one can only hope the prices hold for some years to come, which will allow farmers to continue producing superfine wool for the world market. If they don't, growers will continue to move to other enterprises. Fat lambs, broader wool and cattle still receive more dollars per hectare than superfine wool.

Highlights in our region are small with fewer members. The main highlight is John & Robyn Ive of "Talaheni" winning the ASWGA Regional Fleece Competition.

Danny and Megan Picker of "Hillcreston Park" gained tenth place in the Zegna Wool Trophy with a two-bale line of ultrafine wool.

Our region was honoured to hold the Annual ASWGA Fleece Presentation and farm visit seminar weekend. A good time was had by all. A massive thank you to our committee and the presenters over the weekend.

It is a pleasure to have Neil Carey and Janet Bell back as members. We welcome Ian Cathles as our new Chair and thank you to Lyndall Eeg who is our Secretary-Treasurer.

Also thank you to John Ive, who once again held the fort publicising ASWGA over the three-days of the Great Southern Supreme Merino Show & Ram Sale in Canberra - a very lonely job under current circumstances. I hope all have a good season and wool prices are strong.

Danny Picker

TASMANIAN REGIONAL REPORT

The past year has seen a wide variety of conditions across the state, from droughty conditions on parts of the east coast, to well above average for some in the central north. A series of very localised storms in late summer resulted in significant differences between neighbouring properties. From an industry wide perspective, average. Of greater significance though is the current strength in the wool market. Whilst it is probably enough to stem the flow of resources into other enterprises, it is unlikely to incite a reversal of recent decisions, or to encourage new entrants.

Congratulations to Michelle and Luke Rapley of "Plassey Rural" of Ross took out first place in Tasmanian region in the ASWGA Fleece competition. Also, Tasmania was well represented in the Ermenegildo Zegna Wool Trophy, with Allan & Carol Phillips of "Glen Stuart", Deddington coming second, Simon & Ann-Louise Cameron of "Kingston" Conara taking out forth place and Carol & Rodney Westmore of "Patterdale" coming in sixth place.

In November TFMBA held a dinner in Launceston to celebrate its 70th anniversary. It was well attended by about 50 members,

past and present and associates. Similarly, The Midland Agricultural Association (Campbell Town Show) celebrated 180 years on Friday May 25th and Saturday May 26th this year. TFMBA has a close connection with the MAA. The majority of members having involvement. It is a national icon.

This event has become known Australia wide as the longest continually run show in the British Commonwealth. The reason for its longevity is due to a determined and devoted group of people who found a way to keep it running through the difficult times of world wars and depressions when other shows were unable.

The show celebrated with a wide range of attractions, including the line up of well presented sheep and magnificent display of fleeces and the popular Fashion Parade

featuring wool garments for the discerning patrons. A 220 page book compiling the history of the show was launched, co-authored by Mrs Vera Taylor.

Ian Thirkell-Johnston and Vera Taylor.



Back Row, Vanessa Thirkell-Johnston, Simon Cameron, John Taylor, Allan Phillips, Richard Gee Front Row, Danny Picker, Vera Taylor, Tasmania regional chairman - Ian Thirkell-Johnston, Carol Westmore.

Results of Superfine Exhibits are as follows:

New England Wool prize for 18.5 micron or finer fleece:

- 1st Bruce Dunbabin "Mayfield"
- 2nd Allan & Carol Phillips "Glen Stuart"
- 3rd Bruce Dunbabin "Mayfield"

Champion Superfine Ram Fleece, Nancy Nicolson Memorial Trophy & Wool Solutions Prize: Allan & Carol Phillips "Glen Stuart"

Best Superfine Ram Fleece 70's quality & finer: Allan & Carol Phillips "Glen Stuart"

Best Group of 3 Superfine Fleeces: Bruce Dunbabin "Mayfield"

Supreme Superfine Sheep Exhibit: Georgina Wallace "Trefusis"

180th Tasmanian bred Saxon Merino Sheep ANZ Prize: Glen Mavis

MUDGEE REGIONAL REPORT

The past twelve months have been difficult for many farmers in our region. There has been very little rain, except for some isolated severe thunderstorms that did more damage than good. However, we are lucky, as we still have water in our dams. Hand feeding is now a large part of daily activities for our members and I'm sure it is occurring in other regions as well.

August shorn wool had good tensile strength, with very little VM and later shorn wool was slightly tender. Vege matter for the coming season will be low, except there will be dust and tender wool. This year's wool prices have been good for morale – light at the end of the tunnel. The increase in wool prices is a blessing, as the cost of feed has been a financial drain for most members. It appears that feed costs increase nearly daily.

Wild dog attacks in this region are an ongoing problem and members are still losing sheep. We are doing what we can to solve this problem.

We would like to thank the Yass/Goulburn Region for putting on such a great event for the Annual Dinner and Seminar. Members who attended thoroughly enjoyed the two days in such a beautiful region and with friendly people.

Congratulations to the Hundy family for their outstanding success in the fleece competition. On a sad note, Jill Hundy passed away and our condolences go to the Hundy family.

**Murray Price
Chairman**



Daryl & Irene Croake, Nella & Murray Price



Mudgee regional Annual General Meeting, Left: Irene & Daryl Croake, Brenden Cole & Chairman - Murray Price; Right: Nella Price, Kerry Cole & Danny Picker

HAMILTON REGIONAL REPORT

All superfine woolgrowers in the Hamilton region will have smiles after they have all had a year of better wool prices, some two. A lot of catch up maintenance is now happening and some capital improvements will be able to commence if the prices stay where they are for a few more years.

Some of our members have had great success in the last twelve months, with Glenara awarded the Grand Champion Ultrafine Ewe at the Australian Sheep and Wool Show in Bendigo last year, second in the Pen of Five Sale Rams at Sheepvention, and the Hamilton regional fleece at the ASWGA fleece competition. Everard, Marilyn and Matthew Linke have again been awarded a 1PP bale; and David and Susan Rowbottom have again been very successful, coming second in the Vellus Aureum Trophy.

The Crawford family at Sierra Park had their highest average price at the annual Ram Sale.

Thank you to the Zegna Group and Loro Piana for meeting with the Hamilton and Ararat members during the year. It is good to build closer relationships with the processors at a local level.

It will be interesting to see what happens with traditional 74s and finer production going forward. In this region, there does not seem to be any great swing back towards buying rams that will breed this type of wool. With bolder crimping and 19-23 micron wools selling so well in the second half of the season, people may still drift away due to the heavier cuts that the bolder crimping and stronger wools have.

We have had an interesting season in the last twelve months, with a very wet Winter, and early Spring which dried out very quickly, with very warm temperatures in early November, then 100-200mm of rain in mid-November. This rain came when a lot of hay was on the ground about to be

baled, which affected hay and standing grass quality greatly. This was followed by a very dry Summer. In March, we were thankful that none of our members was directly affected by grass fires in the area, but most were involved in the recovery effort. We have had some good rains in May and June, but more frosts than normal. But, on the whole, we are very lucky compared to the rest of Eastern Australia. Early shearings have shown up some very good wool and as we go into Spring, we should hopefully still have normal cuts and quality with minimal dust and VM.

As we go into the next two to three seasons, it would be good to see prices stabilise around the levels we have seen in March-May. That would let us regain confidence in superfine production and preparation and allow us to invest in improving our genetic base, infrastructure, pastures, environment and staff.

Bradley Venning
Hamilton Region

SOUTH AUSTRALIA REGIONAL REPORT

South Australia has experienced an interesting twelve months. Parts of the State have had fair times, whilst a lot of the State has had awful times with very little rainfall.

2017 finished off reasonably well for the higher rainfall parts of the State, with some good Spring rains; this resulted in an increased hay cut and some good crops. However, a lot of the lower rainfall areas missed out completely.

Where I am situated, in the Adelaide Hills, we had a wet Winter and a good Spring. This meant good water supply to the dams and a good finish to the season, with plenty of feed going into Summer. There was good rainfall in mid-November, but that was the last rain for a few months, meaning the late Summer and Autumn were tough going, with plenty of hand feeding.

2018 has not been very kind to most of the State, with very little rainfall. The Adelaide Hills has been lucky that we have had a start, but the majority of the State has missed out. Many pastoral areas having had nothing.

The word is that lambing percentages are very low in parts and non-existent in other parts. This will have some long-term effects to breeding programs.

The dry Summer did have one advantage,

the fly problems from the year before were non-existent. I did not have to treat a single sheep, which was nice.

High wool prices that continue to rise has also pleased many woolgrowers and has enabled many to upgrade plant and equipment; along with sound meat prices, we are enjoying things. Hoping that it can settle into a nice groove and stay there without too many fluctuations.

At time of writing, we are going through a cold patch with some nasty frosts which are not helping matters, but look forward to hopefully a good finish, although the long-term forecast is not all that encouraging.

Footrot has also been active in SA over the last couple of years, keeping everybody on their toes and watchful. Hopefully, we can get on top of it quickly and also keep lice under control, smaller holdings are sometimes not as vigilant as they should be and spread the problem around.

Looking forward to some interesting times ahead, hoping wool stays firm and the country gets some good rains, otherwise we will lose more farms, many are surviving in our State's North from tourism and catching wild goats.

Nick Seager





Photo: Misty Hills

WESTERN AUSTRALIAN REGIONAL REPORT

Western Australia had good rains early last Spring after a dry Winter, giving some relief from hand feeding, but the rains finished early leaving limited amounts of Summer feed. There were unseasonal summer rains

in December and March, which further reduced the amount and quality of dry Summer feed, but temporary green picks did keep the wool growing. There was serious soil erosion with the March rain and there have been huge dust storms in the South-East of the state. The same Westerly gales in May that caused the dust storms, also caused bushfires in some areas. Russell and Heather Meaton are seriously affected.

Following late opening rains from 25th May, feed is slowly catching up, but hand

feeding has been necessary since December and will be needed for a few weeks yet. Feed reserves are low. Lambing results are historically low in this kind of season, due to higher than usual lamb mortality before, during and after lambing.

Wool cuts will be average or above, but VM will be higher than usual and strength will be variable, with high mid breaks for Spring shearers.

The prolonged low wool prices have seen the demise of many wool clips, especially superfine. Government interference in the live sheep export trade will make farmers cautious about moving back into sheep; a lot of former sheep and cropping properties are now solely cropping. Fences have been removed and watering points run down, so returning to sheep is impractical for many.

Russell and Heather Meaton of 'Misty Hills' continue to excel at shows, with the Champion Superfine Ram at both the Perth Royal Show and the Wagin Woolerama, and the Supreme Fleece at the Wagin Woolerama.

Roland and Anne Ritson of Grindon continue with genetics assisted selection and have over 4,500 sheep in the ASG Database. Good progress is being made with all economic traits, including worm resistance and eye muscle depth. Traditional style wool is being maintained with the help of ASBV's for curvature.

Sale of true superfine rams in WA has dropped by over 50% in recent years, with



Russell & Heather n Supreme Fleece at Wagin Woolerama.
(Photos courtesy of Farm Weekly & Fairfax Media)

recovery not expected for some years to come. The gap is being filled, to some extent, by formerly 19 to 20 micron breeders reducing their micron, but still maintaining the bolder crimp, so although their wool is technically superfine being under 18.5 microns, it is not of the true superfine type. This will remain the case for as long as micron is the only widely used measure of quality in the wool market.

We wish to acknowledge and give thanks to Peter Meakes from Australian Wool Network. Peter retired recently after giving many years of valuable service to superfine woolgrowers nationwide.

Roland Ritson



Anne and Roland Ritson with Peter Meakes



John Croake, Heather & Russell - Champion Superfine Ram at the Perth Show

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NEW ENGLAND REGIONAL REPORT

Production and Pricing

New England superfine wool growers are certainly rejoicing the current wool prices being paid for their clips. All growers would have had a significant pay day as higher prices have continued. It is far better than a few short years ago, as depressed prices drove many traditional woolgrowers towards alternate sheep types or enterprises. Currently the market indicator is 34% higher than this time last year. Prices for sheep have increased too, with mutton selling for \$5/kg.

Despite the favourable pricing for superfine, there is not a rush into traditional wool type sheep. Alternate enterprises are still financially stronger. Bolder wool/productive sheep are popular with numerous growers. This lack of enthusiasm for traditional superfine sheep, represents a challenge in sourcing genetics and maintaining this unique sector of production. Existing growers and buyers need to continue to find ways to re-invoke this enthusiasm for this uniquely beautiful fleece.

Climate

Seasonal conditions are a massive challenge now as the drought worsens. As with any dry period, not all growers are affected equally with some areas having large rainfall deficits. Hand feeding is widespread and expensive due to the extremely high demand for fodder. A considerable number of grazing crops have not grown well, reflecting low rainfall and low stored moisture. Many have sold extra sheep to deal with the deteriorating seasons.

Regional Activities

Armidale Ram Show

The 73rd Armidale Ram Show and Sales were held in February, with many of the studs competing in the various show classes. One Superfine Class, on the day featured with 22 rams. (Photo). The top prices ram of the Merryville Stud sold for \$18,000 and the average price of rams sold was \$4077 being a \$1000 up on the 2017 sale. The Supreme Ram was awarded to the Conrayn stud from Berridale NSW.

The New England Merino Field Days were once again held in January in very dry conditions with visitors coming from all states, including Western Australia. The Field Days are held every two years.

With the improved superfine wool market, on-property ram sales showed some very

positive results with renewed interest in merino sheep production.

Loro Piana

A meeting with representatives from was held in February and attended by about 50 people. The meeting was held to introduce Loro Piana's new contract options developed to support and develop the supply of traditional style merino wool. Loro Piana are offering prices up to 500c/kg above the current spot market for the desired types and an option to lock in longer term contracts and premiums for up to three years.

Regional AGM

The New England regional AGM was well attended this year and included some new faces. ASWGA offers an open invitation to all superfine growers to its events in the region. Presentations were made by invited speakers Lou Hogan from Sheep CRC; Peta Bradley from Sheep Genetics and Paul Vallely representing Loro Piana.

Successes for Regional Members

The Zegna dinner was held in Sydney with New England members winning the major awards. David & Angie Waters won the Zegna Wool Award for the second consecutive year. This is a fantastic result, showing their commitment and dedication to traditional style wool. Congratulations to New England growers and members Philip and Jenni Carlon of Queenlee and new members Margaret and Clive Smith who placed in the top ten. In the Vellus Aureum competition, Ross & Rebecca Blake secured first prize with a 12.5 micron fleece, another fantastic result for the Blake family.

The next morning, Paolo Zegna outlined new initiatives to the growers who attended the dinner. He proposed to acquire an additional 100 bales from the finalists next year. These will be bought at a substantial price above the auction, to reward growers, to promote the product and to maintain the supply of traditional style wool.

The ASWGA dinner/seminar held in Goulburn was attended by a handful of New England members, with drought conditions keeping others at home. A very well organised event included many speakers on wool industry matters and many sheep on display too. The ASWGA fleece competition winners were announced at the dinner, with a New England member securing their first ever win. Mark & Lesleann Waters were awarded the champion fleece title as well

as the 74's and the new England region categories

Other members have tasted success this year as well. At the Sydney Royal show, Joe Carlon from Queenlee Uralla competed in the state junior judging final for merino sheep and secured second place. A commendable effort. His brother Thomas also competed in the same competition and was selected to give the aural presentation, but didn't get a ribbon, still a fine effort. Mark & Lesleann Waters won several grand champion fleece awards at local shows. These including the Guyra show, where there were 355 fleeces exhibited. Their biggest win came at the Sydney Royal, where they won the grand champion fleece in the district exhibits competition. Leo & Judy Blanch at Westvale have excelled in their successes again this year – with an on-property average sale price of \$1,354 and a top sale price of \$5000. Armidale rams sold to tops of \$5500 and \$3000, and Westvale purchased the supreme exhibit at Armidale from "Conrayn" for \$11,000. Pedro (the ram) carried 11 kgs of 16.7 fleece and his fleece went on to become Champion Fleece at the RAS in Sydney. Westvale showed the Reserve Champion Superfine Ewe in Sydney and was 3rd in the Stonehaven Cup. At Dubbo National Sheep & Wool Show, 2017, Westvale secured the Champion Unhoused fleece and was 1st in the superfine ram's section.

Obituary

The New England Region mourns the loss of long time member and Life Member Ross Tully OAM, who passed away in January this year aged 98. Ross is survived by his sons Don and Maurice and daughters Wendy and Lucy. Ross's wife Peg (nee Coventry) predeceased Ross in 2012. Ross and Peg were both involved in the wool industry all their lives and Ross came to "Girrakool", Rockvale, east of Armidale in 1950 where Peg's family has grown Superfine wool for many generations. An Obituary is featured in this Annual.

Cathy Hayne Chair ASWGA New England Region

(Grateful thanks to Mark Waters, Leo & Judy Blanch and Tony and Janet Gall for their assistance in preparing this report.)

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NEXT GENERATION TOOLS SUPPORT WOOL'S FUTURE

As a fifth generation woolgrower, Jack Cotton from Kelvedon Estate, Tasmania, has lived through the many ups and downs of the wool industry over the years. Whilst indeed there have been dramatic highs and lows in relation to wool performance, prices, supply and demand over the past 60 years, Jack says that the tools the industry operate on are still very much similar to those used in the 1960s.



"The industry itself hasn't really changed too dramatically over the years," says Jack, "And it's probably time that it should evolve with the times."

Now supported by his daughter Anna, he is optimistic about the future of the Australian wool industry and is proud to see Anna embracing both the commercial and operational sides of their business.

"Anna's progressive attitude and approach to wool-growing is an asset to our business and her enthusiasm about Kelvedon and the Merino industry is great to have on board," says Jack.

"She really believes that there is no better time to be embarking on a future in the wool industry."

At this year's shearing, Anna encouraged Jack and their team to use the new WoolQ eSpeci instead of the traditional paper speci. WoolQ is an online platform that launched in March this year, which allows woolgrowers and industry participants to

easily harness digital efficiencies across the wool-growing and selling cycle. It offers a suite of digital tools to facilitate more informed decision-making and enable digital communication and exchange.

After setting up their Kelvedon business profile on the WoolQ portal, Anna captured their clip information on the iPad in the shed to create a digital record on their WoolQ dashboard. At the completion of shearing, she signed the electronic eSpeci declaration, and the eSpeci was then automatically emailed through to their broker.

"I found the eSpeci really user-friendly. It is extremely logical as it's a step by step process," says Anna. "The App prompts you along the way and removes the margin of human error, which we all know can happen in a busy shed."

The Cotton's broker, as part of the experiment, embraced the new WoolQ eSpeci tool. The broker set up their WoolQ profile and connected to Kelvedon Estate on the WoolQ App. The completed eSpeci

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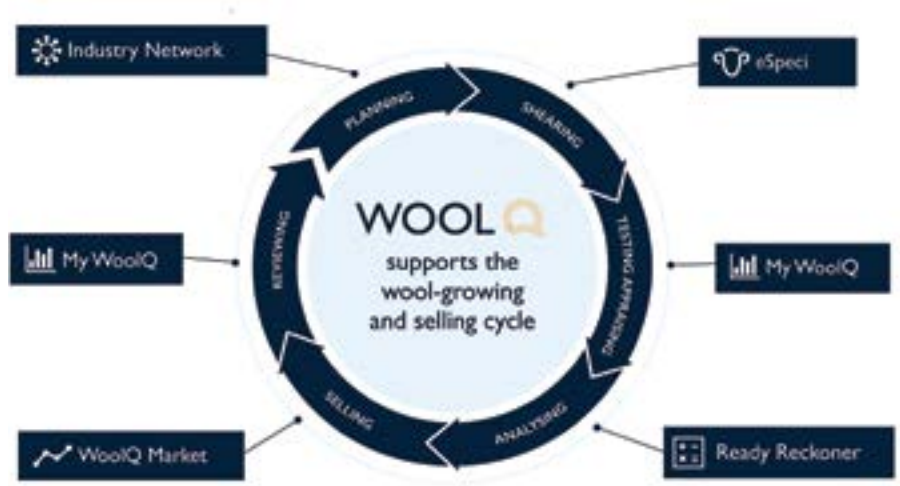
was then automatically received into their system, which eliminated the need for manual entry.

Having witnessed the WoolQ eSpeci in action throughout shearing, Jack sees the benefit of the next generation embracing new technology on farm.

"I can certainly see its advantages, especially for avoiding mistakes, so I think it's a good development and it is definitely worth giving it a go," says Jack.

"Whilst I don't use computers much myself, I'm very supportive of Anna introducing tools like WoolQ to support the running of our business."

WoolQ has just released three new tools in addition to the eSpeci, that are available for immediate use: the 'Industry Network Forum', 'My WoolQ' and 'Ready Reckoner'. With this expanded suite of tools, WoolQ endeavours to support all stages of the wool-growing cycle – from planning, through



to shearing, testing, appraising, analysing and reviewing.

To find out more about WoolQ and to register your business, visit www.woolq.com



ASWGA FLEECE COMPETITION WINNERS 2018

Congratulations to Lesleann & Mark Waters of "Riverton", Armidale for their win in three categories of the ASWGA Fleece competition, the classes 74's along with first place in the New England region and the big one, the "Cleckheaton Grand Champion" Trophy for the best overall fleece.

There were nearly 80 fleeces entered in this years competition and the results were very close.

Presentations were made at the recent ASWGA Presentation Dinner held in Goulburn on the 19 May by Tony Stills of Betta Wool representing our sponsor Bendigo Woollen Mill.

"We were thrilled to win the annual ASWGA fleece competition. There were many very good quality entries and that made it all the more special for us.

It has always been our plan to enter top quality produce so we can score highly. Ideally, we try to have a fleece on view at the annual dinner where the best fleeces from other regions are displayed. We have been fortunate to have had fleeces on display at all five competitions to date.

We exhibit wool at most of our local ag shows and the Sydney Royal and use this to promote our stud and flock sheep."

A huge thank you to our sponsor Bendigo Woollen Mill for the grand trophy and to AWTA for arranging the testing and transport of fleeces for judging. We would also like to thank Roberts Ltd, Australian Wool Network, Schute Bell Badgery Lumby and Landmark/Jackson of Geelong for facilitating the judging, collection and transportation of the members fleeces. It was a huge effort and greatly appreciated by the Association.

A special thanks to the Fleece Competition Committee who has, as always, done an excellent job, especially given the number of fleeces in this year's competition.

Finally, thank you to judges Mark Taylor of Schute Bell Badgery Lumby and Brett Cooper of Australian Wool Network, for their expertise.

Funds raised from the sale of the wool entered in the competition will go back to the Association.

The complete list of winners:

Mark & Lesleann Waters of "Riverton", Armidale NSW, Cleckheaton Grand Champion Fleece Trophy, the Class 74's and first in the New England region.

Lyndsay & Noel Henderson of "Avington Merinos", Sidonia, Victoria, first in the Class 70's and first place in the Ararat/Barunah region.

Trevor & Kathy Mibus of "Glenara Merinos" Dunkeld, Victoria, first in the Hamilton Region.

Robyn & John Ive of "Talaheni", Yass Valley, first in the Goulburn/Yass Region.

Penny & Andrew Hundy of "Windradeen", Mudgee, NSW, first in the Class 90's.

Jill & Ed Hundy of "Windradeen", Mudgee, NSW, first in the 80's and first in the Mudgee region.

Michelle & Luke Rapley of "Plassey Rural", Ross, Tasmania, first in the Tasmanian Region.

James & Faye Pepper of "Mumballview", Mumballup, Western Australia, first in the West Australian region.



Mark & Lesleann Waters of Riverton with their Grand Champion Trophy and winning fleece.

ASWGA ANNUAL FLEECE COMPETITION

The fleece competition attracted 79 fleeces from seven Australian Superfine Wool Growers' Association (ASWGA) regions (Table 1) with an average of just over three fleeces entered per participating grower. Ararat-Barunah with five growers entering the most fleeces, although the number of fleeces entered was relatively consistent across most regions.

Fleeces from each region fell generally within a common quality count range, predominantly 70's to 80's count. Most Regions have a relatively wide variation in the score received by individual fleeces, with over ten points being consistently common. While seasonal

conditions varied from Region to Region, there is little evidence that variation in seasonal conditions hampered any Region producing high scoring fleeces, as evidenced by the similar score range for each Region, and similar fleece weight variation, although having experienced harsh seasonal conditions for at least the past 18 months, Goulburn-Yass fleeces were significantly lighter than those from the other Regions (Tables 1 and 2).

Table 1 (below): Overall summary by Region of 79 fleeces entered in ASWGA Fleece Competition.

No.	Region	Growers no.	Fleeces no.	Quality range	Weight range	Score range
1	Ararat-Barunah	5	20	70-74	1.5-5.9	72.4-94.4
2	Goulburn-Yass	3	13	70-80	1.3-3.3	77.9-93.0
3	Hamilton	3	10	70-80	2.3-4.6	82.6-91.9
4	Mudgee	4	11	70-90	1.8-3.6	78.4-93.7
5	New England	3	9	70-80	1.8-4.8	81.9-96.1
6	Tasmania	6	14	70-80	1.8-3.4	76.9-91.8
7	Western Australia	1	2	74	2.8-3.0	84.9-85.8
Total/ Mean		25	79	70-90	1.3-5.9	72.4-96.1

The mean scores of the fleeces entered from each Region (Table 2) highlights regional variation. For instance, fleeces from New England and Mudgee consistently scored better across all attributes relative to the respective means, while Tasmania consistently underperformed relatively to the respective attribute means. The other Regions performed variably. Table 2 also shows the overall ranking of the Regions, with New England narrowly ahead of Mudgee and with Hamilton coming third. The other four Regions were below the mean score.

Table 2 (below): Mean attribute scores for each ASWGA Region and overall. Green highlighted cells are above the average for the attribute and tan highlighted cells are below the attribute mean. Non-highlighted cells equate with the attribute mean. The overall mean attribute scores are shown as a percentage of the maximum possible score for the attribute. The coefficient of variation (CoV) is also shown for each attribute.

Region	Flbs (no.)	Wght (kg)	Wght (22)	Yld (10)	Trueness (20)	U'form (15)	Even (18)	Excel (15)	Score (100)	Rank
Ararat-Barunah	20	3.1	17.7	9.0	16.7	13.6	16.0	12.9	85.9	4
Goulburn-Yass	13	2.2	15.1	9.1	17.3	13.9	16.2	13.5	85.2	6
Hamilton	10	3.2	18.8	9.2	17.3	13.2	15.9	12.5	86.9	3
Mudgee	11	2.8	18.7	9.3	17.6	13.7	16.1	13.5	88.9	2
New England	9	3.1	17.9	9.2	17.9	13.9	16.3	13.9	89.2	1
Tasmania	14	2.5	16.2	9.1	16.6	13.7	15.6	12.7	83.8	7
Western Australia	2	2.9	17.2	8.9	17.0	14.0	16.0	12.3	85.4	5
Total/Mean	79	2.8	17.3	9.1	17.1	13.7	16.0	13.1	86.3	
Possible (pc)			78.6	91.0	85.5	91.3	88.8	87.3	86.3	
CoV (pc)		32.4	18.0	4.2	7.3	4.3	4.0	8.3	5.9	

Of the six attributes judged, the mean score for Yield received the greatest proportion of that possible (91.0 pc) and Weight received the least proportion of the possible score (78.6 pc). Uniformity (91.3 pc), Evenness (88.8 pc), Excellence (87.3 pc) and Trueness (85.5 pc), all received a relatively uniform and high proportion of the possible score (Table 2).

Taking the mean results for each Region, the six attributes judged were variably correlated to the final Score (Table 3). Weight, the dominant attribute, was highly correlated to the score ($r=0.834$) and contrasts with Uniformity, which was least correlated ($r=0.196$). These dual, but contrasting correlations, are consistent with the purpose of fleece competitions, namely to reward heavy cutting fleeces within their quality count class and not the quality count per se.

It is somewhat surprising that Yield (keeping in mind clean fleece weight rather than greasy fleece weight is paramount) was ranked

lowly in determining the score. Not only does Weight offer the biggest possible contribution (22 pc) to the score, but the value for this attribute is the best predictor of a fleece's overall score. On the other-hand, with Weight receiving the least proportion (78.6 pc) of that possible, it offers the best opportunity for improvement for underperforming fleeces; this is reflected also in having the highest CoV (18.0 pc) of the attributes. Trueness and Evenness are next important to Weight in determining the score, although Evenness has the lowest CoV (4.00 pc) reflecting high consistency across the fleeces and suggesting little opportunity for improvement. Likewise Yield (4.22 pc) and Uniformity (4.31 pc) with similar low CoVs (Table 2), also provide limited opportunity for improvement.

Table 3 (below): Correlation and importance rank of each attribute against the score.

Attribute	Weight	Yield	Trueness	Uniformity	Evenness	Excellence
Correlation	0.834	0.639	0.813	0.196	0.720	0.588
Rank	1	4	2	6	3	5

The weight difference between the lightest (1.3 kg) and heaviest (5.9 kg) fleece was surprisingly large, 4.6 kg, or more than a fourfold difference. Surprisingly the extremes had adjacent quality counts (80's and 74's respectively) and, although from different Regions, a smaller fleece weight difference would be expected. In addition, for most fleece weight intervals (Table 4), there is considerable variation in the score received - an average of more than 10 points. As expected, there is a general increase in score as fleece weight

increases, peaking for the 4.0-4.9 kg interval due to the weight cap. Consequently, because of the upper cap for fleece weight, top scoring fleeces need not be in the highest weight interval. In fact, the fleece receiving the highest score was only 80 percent of the weight of fleeces in the heaviest interval.

Table 4: Comparison of mean Score and difference between minimum and maximum Score for different fleece weight intervals.

Weight (kg)	Mean weight (kg)	Min Score	Max Score	Mean Score	Score difference
1.3-1.9	1.7	72.4	84.9	79.3	12.5
2.0-2.9	2.5	77.7	91.8	85.6	14.1
3.0-3.9	3.3	82.9	95.6	89.6	12.7
4.0-4.9	4.6	86.9	96.1	92.7	9.2
5.0-5.9	5.6	91.4	93.4	92.2	21.0
Overall	2.8	72.4	96.1	86.3	

Interestingly, the composition of the fleece entries has changed significantly over the last five years. In 2013-14, the dominant class was 90's (49.2 pc), then a near even distribution across the Classes in 2014-15, followed by 80's domination (46.7 pc) in 2015-16, then near even distribution again in 2016-17, before domination by 74's (55.7 pc) in 2017-18. This broadening trend replicates changing sale volumes of the various superfine classes over recent years.

Table 5 (below): Comparison of entries by Class over the last five years. The blue highlighted cells indicate a broadening of the dominant class over the past five years.

John Ive
Talaheni

Class	2017-18		2016-17		2015-16		2014-15		2013-14	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
60s			1	1.4						
70's	11	13.9	13	18.3	5	4.7	7	12.3	3	4.6
70s-74s					5	4.7				
74's	44	55.7	18	25.4	16	15.0	16	28.1	6	9.2
74's-80's					13	12.1				
80's	22	27.8	22	31.0	50	46.7	19	33.3	24	36.9
80's-90's					4	3.7				
90's	2	2.5	17	23.9	13	12.1	15	26.3	32	49.2
90's- 100's					1	0.9				
Total	79		71		107		57		65	



Dr Peter Morgan speaking on behalf of ASWGA at the recent IWTO Congress in Hong Kong.

2018 IWTO CONGRESS – WOOL FOR FUTURE MARKETS

This year’s IWTO Congress was held in Hong Kong at a very positive time for the wool industry. It attracted around 250 delegates, of which seventy were from Australia and twenty-seven from China. It was also rated as a very good Congress. Topics covered ranged from technical issues, through market intelligence, to product development and marketing.

MARKET INTELLIGENCE

The Market Intelligence Forum, chaired by Chris Wilcox, is one of the most important Sessions of the Congress. It is always of a high standard - as it was again this year. Needless to say, there was considerable interest in the drivers behind the current market for Merino wool and where it is going to from here.

Key points from Chris Wilcox’s presentation included -

- Merino wool prices are increasing at a faster rate than cotton and competing synthetic fibres.

- Wool prices are in a “Super Cycle”. He referred to four previous Super Cycles since the mid-1980s, of which the longest was from February 1986 to May 1988. The others ranged from 57 weeks to 97 weeks. The current Super Cycle has been going for 111 weeks.
- In regard to broader global economic conditions, economic confidence is close to twenty-year-high levels in the EU and the United States.
- In summarising prospects for 2018/19 for Merino wool, Chris referred to -

On the positive side

- Stocks are below normal in early stage processing and at normal levels in other sectors
- Increased demand, particularly from China
- Higher economic growth leading to increases in commodity prices

- Higher consumer confidence and sales activity
- Good business conditions in the wool textile industry
- Increased use of Merino wool in active and leisurewear

On the risk side

- Risks to the global economy
- High price relativity against competing fibres
- Lower imports of wool clothing
- The outlook is less promising for crossbred wool

CHINA

Madam Peng (China Wool Textile Association) and Madam Chen Lifen (Sunshine) spoke of the ever-changing circumstances in China. Highlights from their presentations included -

- A very positive outlook for domestic consumption
China’s middle class grew from 250 million in 2013 to 370 million in 2016. Consumption spending among 25 - 35 year-olds currently accounts for 11% of consumption; spending among people aged from 15 to 70 is low, but is expected to grow to 60%
The proportion of consumption spending on food, clothing and services is continuing to grow
- The export scene is also positive after two negative years
China exported wool and woollen goods valued at \$7.2 million in 2017 - 7.8% more than in the previous year



Young Professionals Group Shot

- Increasing attention is being placed on environmental issues. This has become a very important issue in China, particularly as China works to make its economy less dependent on manufacturing

Note - export data from the Australian Bureau of Statistics shows that exports to China accounted for 79.1% by weight and 76.6% by value of Australia's global wool exports in the eleven months to the end of May 2018. They are up by 3.5% by weight and by 19.6% by value since May last year.

In another interesting presentation, delegates were given an overview of the "Belt and Road" (BRI), formerly "One Belt, One Road"

It largely involves the building and linking of rail lines between China and the Middle East, Africa, other parts of Asia and Europe and the opportunities created by these infrastructure initiatives for trade, investment, cultural exchanges and policy integration.

Product Wellness

AWI has invested significant funding into a variety of new uses for wool.

Some of this is in the important area generally known as Product Wellness. The two areas of particular attention at the moment are -

- The use of Superfine wool garments for next-to-skin wear to reduce the occurrence and intensity of eczema in babies and adults. It is well known that wool has a greater ability to take up moisture than any other fibre. It is understood that this property leads to greater hydration of the skin and reduces the impact of eczema.
- The ability of woollen sleepwear and bedding to improve sleep behaviour is well known. The origin of this work goes back many years, but the research has been rejuvenated in recent years. Both of these projects have reached the stage where communication techniques are being developed to spread this information among key stakeholders.

Biosecurity

As is well known, the Australian agricultural industries and the Australian and State Governments have major programs in place to minimise the risk of an outbreak of an Emergency Animal Disease (EAD) such as Foot and Mouth Disease (FMD). The Australian wool industry plays a major role in this through work, facilitated and coordinated by the Federation of Australian Wool Organisations (FAWO).

IWTO plays a major role also; as do the other

grower countries. It was very encouraging to hear reports from other grower countries of the work being done in their countries.

Sustainability

Sustainability always appears to include an ever-growing list of issues and ever-changing legislation, as knowledge increases.

- One of the "new" issues is the increasing quantities of microfibres that are contaminating the world's oceans. The microfibres become attached to plankton and enter the food chain when the plankton are eaten by fish. It is impossible to totally prevent this form of contamination from occurring, though the effects can be minimised if the contaminating fibres break down quickly. Wool fibres are believed to break down more quickly. Agrisearch (New Zealand) scientists are conducting important research on this matter.
- One of the frustrating sustainability issues is the failure of the various Ratings Systems to account properly for wool's strengths from a sustainability perspective. David Maslen (New Zealand) and Stephen Wiedemann (Australia) spoke on the work being done to have wool's sustainability credentials more accurately reflected in the various Sustainability Ratings Systems. This work is essential, given the apparent ability of other fibres to have criteria included in the Ratings Systems that are unsympathetic to wool. Paul Swan spoke on a related theme.
- A presentation by the Hong Kong Government reported the progress that is possible to achieve in reducing the use of electricity, by the creation of more environmentally "friendly" buildings through building design and the use of wool fabrics.

Digital Technology

Automation and electronic technology are becoming increasingly available for use on

farms. It is also a key part of AWI's program of work.

Greg Spencer (AWI) gave an update on parts of the AWI program, particularly:

- The use of "Smart" ear tags to enable better identification, tracking and monitoring of animal activity on-farm.
- Electronic bale-id tags which can also measure within bale temperatures. The latter is critical information in the management of some diseases, such as Foot and Mouth Disease.

Other Presentations

In other presentations -

- Will Wilson delivered an update on progress with WOOLQ.
- Paul Vallely and Peter Morgan provided an update on their work on monitoring the falling availability of traditional Superfine wool in Australia by studying changes in the availability of wools with high Fibre Curvature values.

The volume of wool with Fibre Curvature values of equal to, or greater than, 80 degrees/mm had fallen by 34.7% from June 2013 to June 2017; and by a further 16.3% by the time of the IWTO Congress in May 2018, whereas the volume of all wool of 18.5 microns and finer increased by 15.5% to June 2017 and by an additional 6.5% at the time of the Congress.

Dr Peter Morgan



Simon Cameron with AWEX's Robyn Clubb at IWTO



Simon Cameron with delegates at IWTO 2018



“THE QUALITY OF GLOBAL MERINO PRODUCTION”, 10TH WORLD MERINO CONFERENCE, URUGUAY

The World Federation of Merino Breeders held their 10th Conference from 7-15th April in Uruguay. Around 350 delegates from sixteen countries attended providing a unique opportunity to listen, share experiences and marvel at the sheer adaptability and versatility of the Merino sheep.

Uruguay is 75% the size of Victoria, with 3.3 million people, most of whom live in the capital, Montevideo. A largely pastoral country, rainfall is 1200 mm annually, although 2017/18 has seen a severe and unusual drought. Currently, there are 12 million cattle and 6.5 million sheep, 25% of which are Merinos, the rest mainly Corriedale. Interest in sheep, particularly Merino, is growing and recent genetic improvement has involved Australian imports from several major studs. Nerstane, Hazeldene, Alfoxton and Yalgoo are prominent.

300 delegates attended the Pre-Conference Tour starting in Durazno, where we were welcomed by Juan Carlos Tafernaberry, President of the Uruguayan Merino Breeders

Society. Ten breeders exhibited their sheep, some registered flocks, some commercial. The best were bred from the stud sheep at INIA, the National Breeding Centre. Our Uruguayan hosts made us very welcome everywhere, with wonderful food and displays of horsemanship and local folk dancing. The enthusiasm for Merino and genuine warm hospitality were a flavour of what was to come throughout the tour and conference.

Next stop was the Lanás Trinidad Woollen Mill. Ethical Trading and Animal Welfare are top priorities. There is no mulesing in Uruguay. Environmental care and social welfare for staff are priorities. The mill is accredited by the Responsible Wool Standard and GOTS, among others. 10,000 tonnes of 18-30 μ wool top is produced per year and exported all over the world. The mill is encouraging the trend towards Superfine wool and currently buys 60% of the wool of 16-22 μ at the farm gate.

A visit to La Magdalena stud gave the opportunity to compare a typical well-managed Uruguayan sheep enterprise with

those back in our home countries. A mix of Merino and Corriedale were run on mostly natural grasses, with some improved pasture in winter and spring. Annual rainfall was 1200 mm and 17,000 sheep were stocked at 1.85/ha. 45,000 kg of Merino of 18.8 μ was produced each year. Lambing percentage was 160% with AI success 15-20%. Australian genetics were prominent helping to maintain micron while increasing body weight and cut. We learned that Uruguayan labour costs are 4 x cheaper than Australia and that shearing was 1 USD per head. Flystrike was not a problem.

At our hotel and resort, the Uruguayan breeders held their annual show and sale. Sheep were judged by Charlie Merriman; wool by Andrew Dennis and Steph Brooker-Jones of Elders. The standard of both was impressive, with modern Australian genetics coming through strongly. A Young Judges competition showed commitment to encouraging the next generation.

A visit to INIA, a 100yr old Agricultural Research Institute in the department of

Paysandu, gave us an insight into CRILU -the project for Ultrafine Merino. Twenty years of development had proved that producing excellent wool and meat was possible, that there were good business prospects and that cooperation among breeders and growers was important. International demand was increasing for finer wool, which addressed concerns over traceability, welfare, ethics and sustainability. Uruguay was well placed to provide such wool. The restrictions were; lack of knowledge among farmers, lack of sufficient genetic material and lack of organisation. This the CRILU project was helping to change.

Breeding stock flowed out of the project nucleus to farmers. INIA had developed breeding values and indices relevant to Uruguayan needs. A 50 kg CRILU ewe was now producing 4.5 kg of 15.6µ wool.

Back in Montevideo the Conference proper began with a welcome and introduction by Diego Otegui, Chairman of the Organising Committee, Tom Ashby, President of the WFMB and Roberto Cardellino, Program Coordinator.

Country reports, "Taking Stock" followed. Peter Meyer of AASMB reported for Australia. There are more than 900 registered studs and the transition to polled sheep is increasing rapidly. Of the 40 million breeding ewes, 11 million are not Merino. The recent rise in production has been mainly in the 18.5-19.4 µ band. 47% of sires are now ASBV assessed. Lifetime Ewe Management and similar programmes are helping breeders to improve fertility and lambing % and there is great emphasis on getting young people into the industry. The

future looks stable and successful.

The Uruguayan report told us that the forty farms in the CRILU fine wool project averaged 18.2µ with CV 21%, length 91 mm and 34.8N/KTex. Uruguayan wool was seen as ethical, clean and socially responsible. Innovation and research are high priorities, with an emphasis on Animal Welfare to maintain their growing reputation. Sheep numbers are down, but Merinos are increasing proportionally. 26% of wool is less than 22µ. Most is exported as top rather than greasy.

Argentina produces 26,000t of fine Merino from 6.5 million sheep – 60% of all Argentinian wool. Production is concentrated in Patagonia. Sheep average 4 kg/head of 20µ. Farms are very large with low stocking rates. 68% of farmers have 500 sheep or less. A Post Conference tour to Argentina spent time touring Patagonia.

New Zealand reported a steep decline in Merino numbers from 4 million in the 1980s to 2 million now, due to historic low prices and depasturisation of the high country. Of the 8 million tonnes of wool produced, 2/3rds is sold on forward contracts to buyers looking for non-mulesed, traceable, ethically sound wool. Footrot is a problem. Breeding for resistance, EBVs and gene markers are all being used to combat it. While broad wool struggles on the world market, demand for meat and Merino wool is high and this is a good time for NZ growers.

Brief reports were also heard from Portugal (Black Merinos!) and the USA where 5 million breeding ewes are concentrated in the north west of the country.

Professor James Rowe of CRC then spoke about Genetic Evaluation programs. The main gain is shortening intergenerational intervals. 47% of all studs are now in Merino Select. Performance, Pedigree and Genotype all feed into Single Step EBVs and indexes help you chose your emphasis. Breeding Values are a tool, but expression of those traits depends on environment and management. There was still a need for subjective assessment. MateSel, Single Step, Ram Select and Genomic Flock Profiling all rely on cloud-based computing. Collaboration with the international Merino community, sharing data between countries would benefit everyone by increasing core data.

A presentation on Internal Parasites by Daniel Castells, a leading researcher in Uruguay, reminded us that, despite 10,000 years of domestication, sheep are still poorly adapted to temperate grasslands in terms of coping with parasites. Production in these areas is not possible without intervention. He outlined the different approaches :- Chemical, Natural Immunity promoted by improved nutrition, Genetics and Vaccines, Grazing Management and Bioactive Grazing. Chemical control leads inevitably to resistance, breeding for improved immunity by increasing resistance and resilience was possible, but there was a negative correlation between WEC and FD. Selection based entirely on FEC led to a decrease in production in the finer wools. Vaccination for Haemonchus (Barber Pole), showed some promise, but was not the total answer. After the 4th booster, a reduction of 82% was achieved in some areas but only 51% in others. Grazing management and bioactive forage were useful tools. The take-home



Speakers at Conference

message was a combination of methods adapted to local circumstances being the only sensible way forward.

Walter Baethgen, of the University of Columbia, gave a presentation on Climate Change saying that accurate climate modelling was not possible. Most predictions were based on little more than guesswork and were not usable for long term Impact Assessment. A newer approach was to regard Climate Change as a problem for today, not some unknown tomorrow. Year to year variability was one of the most damaging effects with drought, storms, floods and heatwaves all impacting on Agriculture more often than in the past. Improving resilience to these events was key to dealing with whatever might happen in the future. The six Ginkgo trees that survived in Hiroshima did so because they had 2 million years of experience coded in their genes and tremendous resilience.

Agriculture needs to copy that and build in resilience at every opportunity.

The second day of the Conference began with an excellent presentation by James Rowe of CRC on the meat and wool potential in modern Merinos. Both are becoming luxury products in niche markets. Composite breeds are rivals for sheep land, as are cropping and cattle. Quality and adaptability are key to survival. Merinos are versatile. Fining the clip and increasing carcass and fleece weights have increased income. Faster growth is needed but not into enormous animals – just quicker out of the blocks. The Flock Profile Test and Ram Selection Index can help manage in-flock variation and refine breeding objectives.

Dave Pethick, of Murdoch University, followed this up with an interesting presentation on the eating quality of Merino lamb and yearling carcasses. International

consumer studies showed they will pay for quality and there was NO discernible difference between grain and pasture-fed animals. Better taste came from animals gaining 100 g/day right to the point of slaughter. 20 kg carcasses were the right size, with 16 kg light lambs popular in the Middle East. Heavy lambs went well in the USA. Merino wethers of 4-5 years ate well in taste tests, but cull ewes less so. Intra Muscular Fat was a good predictor of eating quality and was highly heritable. Genomic prediction of IMF was possible through Merino Select, although fast growth was the most important trait to select for.

Chris Wilcox, Director of NCWSBA, spoke about the current wool market. Merino is in a “Super-Cycle”, currently the second-longest in history, while crossbred wools globally are declining. The drivers are world economic growth and a supply deficit. China is in the driving seat as incomes go up and per capita consumption of wool products increase. 35% of Merino goes into knitwear, 38% into men’s business suits – a risk area with increasing informality in the workplace. Women’s wear wool use has declined and is likely to continue down. SPORTSLUX – luxury Athleisure wear for office and leisure is what is driving foreseeable growth. Future risks are rising interest rates, global financial imbalance, the debt burden in China and an unpredictable China/USA trading relationship with the threat of an all-out trade war. Currently 50% of the wool imported into China is re-exported as garments. This is dropping off and stocks are building. Supply of Merino is unlikely to increase soon. 70% comes from Australia, where competition from alternative land use, the change to meat sheep and the severe climatic conditions are all impacting any increase in the national flock. External factors will ultimately decide the end point of the current cycle, but history shows a decline never reaches the previous lowest point.

Facundo Ruvira, of Fray Marcos Tops, Uruguay reminded us of the growing importance of certification schemes. These are market driven, led by big brands responding to customer demand. Labelling is a key point of difference. There is a “post-truth” environment among younger consumers, where facts are far less important than emotion and personal belief. Picking the right scheme for your end user is crucial. Multiple certification schemes are leading to confusion and inconsistencies. Clarification and rationalisation are required to avoid devaluing the system.

Craig Smith, from PGGW in NZ, led us on very neatly from this, saying that premiums followed on from certification but integrity schemes were too generic, too expensive and too numerous. Consumers were



Daryl and Irene Croake –ASWGA members

confused. Mulesing was a clear standout issue, where the premium for NM was market driven and consumers understood the difference.

Marius Cuming, of AWI, explained that selling product was the best way to beat the anti-wool Animal Activist movement. Wool was a niche fibre, breaking away from cotton and now more comparable to cashmere. Marketing was vital. The world does not need wool. Constant pressure to "Chose Wool" was essential. Current trends were to emphasise health benefits such as the use of SF for eczema, the environmental positives of sheep and wool and the amazing versatility of the fibre in technical textiles, with flat knit, warp knit and Optim waterproof technology. Sport is a key market and the home market needs developing. Only 1% of the Australian clip is sold in Australia.

Formal wear had been mentioned a risk area for Merino. Richard Boide, of Dormeuil, described a changing and tough market, where cloth buyers are young without the detailed understanding of wool of previous generations. Concentrating on Uber-luxury was increasingly important, as was the need for Traceability, Sustainability and Environmental and AW guarantees. Personalisation and customisation were key – the standard

business suit had a limited future.

Peter Ackroyd of IWTO emphasised this. Merino was right at the top end of a niche market and must be of the very best. The wool story is strong. Growers must face the challenge of the anti-wool groups and tell that story.

Conference was closed with thanks from Tom Ashby (WFMB Chairman) and Diego Otegui (Organising Committee Chairman). It had been a resounding success with informative and thought-provoking content,

matched by great networking opportunities. Uruguay was a wonderful surprise to all of us and is clearly one to watch in the future if their passion for Merino and great progress so far is anything to go by. All the delegates welcomed the news that the 2022 conference will be held in Hungary, with a post-conference tour to Portugal. There will be an interim meeting in New Zealand in 2020.

Lesley Prior



Delegates during visit to National Breeding Centre



ASWGA Wool Ties

Ties available in Gold,
Green & Burgundy.

Available from ASWGA office
Contact Melissa (03) 9311 0271



HILLCRESTON PARK SUPERFINE MERINO STUD 26TH ANNUAL ON-PROPERTY RAM SALE

THURSDAY 18TH OCTOBER 2018 INSPECTION: 10AM AUCTION: 1PM



5 stud & 30 Specially Selected Ultra & Superfine Merino Rams & 15 Poll Merino Rams
Two stud and 23 specially selected superfine poll merino rams

Danny and Megan Picker

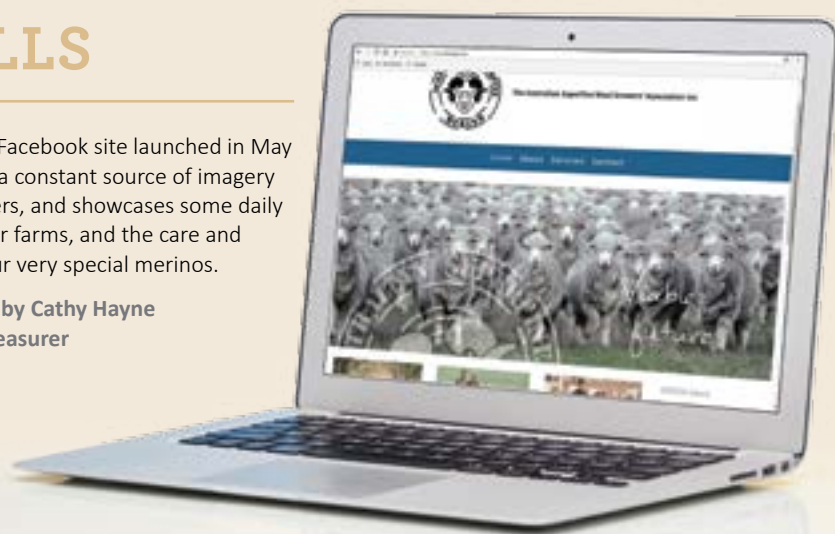
p: 02 4835 2220 m: 0427 123 478 e: dan.d@activ8.net.au w: hillcrestonparkmerinos.com

TRACEABILITY AND CONNECTING GROWERS AND MILLS

ASWGA is still enhancing its social media presence. With design by Michaela Mills Design, the new look website launched in 2017, and is still undergoing enhancements. We are still enhancing our on-line presence, with the ultimate vision of showcasing the regions where our member farms are located, to attract international buyers who wish to form relationships with our grower members. <https://www.aswga.com/>

The ASWGA Facebook site launched in May 2018, and is a constant source of imagery from members, and showcases some daily events on our farms, and the care and welfare of our very special merinos.

**Contributed by Cathy Hayne
Honorary Treasurer
ASWGA**



BELLEVUE PARK WOOL



Bellevue Park is a small family-run sheep farm in the foothills of the Snowy Mountains. This picturesque farm is located 32 km from Berridale and 37 km from Jindabyne, just below the lake Eucumbene dam wall.

This fourth generation family farm has been producing traditional superfine wool since 1984. Bill Fletcher saw the advantages of producing traditional superfine wool early

on, so he purchased one ram and twenty-five ewes from Grathyn Merino stud. From these small beginnings, he slowly changed from a fine wool type to the supers they run today. Now they run about 3,000 superfines across their two properties.

Like so many farms these days, with income barely covering the ever-increasing costs, Bellevue has had to look to see how it could

become an innovative and sustainable business, not just for the present time, but in order to become a farm for future generations. In this drive to become a farm that is not only sustainable with its income, but also with its environmental and animal welfare, the Fletchers have come together as a family and developed a plan to make the most out of what they produce.

In 2013, when their intergenerational handover was started, they had a look at their business model and decided that something had to change. This is when Bellevue Park Wool was born. It would take a further two years before the first batch of wool would return as knitting yarn.

The raw wool is sent to New Zealand for processing - a process that takes about six to eight months to complete. The fleece that is sent for processing has an average micron of 16, a staple length of 80mm, tensile strength of 41 newtons and a favourable top or bottom break. But what really sets this wool apart from the rest of the field is its outstanding handle and next-to-skin rating. The lustrous wool with its tight crimp gives the yarn the lovely ability to hold colour and holds its shape as a finished article.

The farm is currently being handed on by Bill and Wendy to their youngest son Jim and his wife Elizabeth. The business is a family affair with Bill and Wendy's second daughter, Christina (a graphic design artist) involved in the set up and layout for the labels, website and promotional material. Debra Graham (Elizabeth's mother) has designed and written all the knitting patterns as well as knitting many sample items for display on the stall. Her husband Ted is also involved with helping out regularly at field days and markets. Bill's brother, Bob, is also a big help, regularly manning the Hall Markets as well as the Fibre Festival held each May at the Old Bus Depot Markets in Canberra.

The wool is processed into twenty different colours in 4 and 8 ply yarn, tops and undyed natural hanks, and they also sell some raw fleece. The natural hanks are also hand dyed by Drover and Classer, who produces an exclusive colour range for Bellevue Park Wool. There is still plenty of room for growth in this business as only 10% of the clip is being utilised and there are plans being developed to use 30-40% of the clip.

Yarn lovers inform us that it is just divine to work with and flows well on their needles, with many saying once they start a project with this yarn they just can't stop and can't go back to using anything else. When asked about the demand for the knitting yarn, our knitters say there has been a revival in the craft as a new generation get into the hobby. They say it is great to help unwind and they just love being able to show off what they have made. People are also chasing that unique item that no one else has.

With Jim and Elizabeth welcoming their first daughter Evelyn last year, it has made the need for sustainable and ethical farming more important for the future generations at Bellevue. The Fletcher family have a great passion for the wool they produce and it shines through in the finished article.



Jim and Elizabeth's daughter Evelyn.

ROSS TULLY OAM

Ross Tully, formally of GIRRAKOOL, Armidale, worked in the wool industry and as a superfine wool grower for most of his life, culminating in meeting Her Royal Highness, Princess Margaret, to accept the Lumb's Golden Bale Award in 1981. A founding member of the ASWGA in the New England region, Ross was involved with ASWGA as a grower until 2007, when he was awarded Honorary Life membership of the Australian Superfine Wool Growers Association.

He commenced work with the Commonwealth Wool and Produce Company



Ross Tully OAM

in Sydney in 1938. He was a "penciller" for the chief wool auctioneer and valuer, graduating to lotting of the wool and valuing. He was in charge of the XB Stars and dealing with wool not sold. XB Stars were a cross between Australian Merinos and British Downs breeds; any cross with a micron between about 20 and as broad as the hair on a cats tail, about 36 microns. It was also his responsibility to read through to Head Office how the sale catalogue was to be printed. All this was great experience, it was a good job and these were not easy to obtain, the country was getting over the Depression.

At Auction, pre-war, the bids were in pennies or farthings and one was lucky to get a penny advance. In 1939, when World War II commenced, the Australian Government purchased the entire wool clip. Wool brokers represented the growers and continued preparing clips for appraisal. Each bale was assessed on fibre diameter, length of staple, style, colour, foreign matter, yolk and obvious faults, like tenderness. Depending on the specific wool type, the wool was appraised by two wool buyers and one broker representative, then the final price to the grower was decided.

Ross had to be conversant in over 600 types, encompassing greasy wool, scoured wool, carbonised wool, fell mongered wool and dead wool. There were not many people in Australia who had the advantage of

this knowledge. It was called a reserved occupation and, as a consequence, Ross was unable to join the Armed Forces until later in the war. When things got desperate in 1941, both Ross and his future wife, Peg, served in Australia, New Guinea and Morotai and Ross also served in Borneo.

Ross and Peg (Coventry) were married in 1947 and had 4 children, 14 grandchildren and 17 great grandchildren. After retiring in 1980, Ross and Peg split their property, GIRRAKOOL, amongst their 4 children. Ross became a consultant for a wool firm in New England, which gave him time for hands on advice and encouragement to many growers who sought his opinion.

His active roles in wool growing, buying, classing and judging were contributing factors to Ross being awarded an Order of Australia Medal in 2006 for services to the wool industry and to the community of Armidale.

Ross was also active with the CSIRO, TAFE, Salvation Army, Show Society, Wool Expo, Bushfire Brigade and local nursing homes over many years.

Ross Tully passed away peacefully on the 22 January 2018.

He will be missed by the wool industry, his community and his family.

JILL HUNDY

Born in 1940, Jill, along with her five siblings, was raised in Mudgee, NSW. After completing her schooling, Jill worked for a local accounting firm in Mudgee. Jill was a passionate netballer in her younger years and enjoyed playing golf in later life.

In 1962, Jill first arrived at "Windradeen". As a born and raised 'townie', this was Jill's first experience on a farm. Having first met Ed Hundy at school, a relationship blossomed after reconnecting at local dances. Jill married Ed in 1964 and went on to raise their four children on "Windradeen".

Having been mentored by the likes of her father-in-law Gus Hundy, along with wool agent and close family friend Kelly Mills, Jill soon mastered the art of preparing superfine wool. She was an integral part of the production and preparation of the Windradeen woolclip.

Jill thoroughly enjoyed her time working within the wool industry, but if you had

asked her, you would find she privately favoured working on the property, in preference to the more public role she filled as the producer of the world renowned wool brand, ASH/WINDRADEEN.

The love of Jill's life was undoubtedly her family. She found her contentment and happiness in their company, as well as her beloved chooks, garden, roses and the odd pet lamb or two that came her way.

A loving and caring wife, mum and mother-in-law, Jill was also an exceptional grandmother, lovingly known as 'Nanna' to her eleven grandchildren. Jill had a sign in the kitchen that stated, "what happens at Nanna's, stays at Nanna's", which all the grandkids loved. She was an endless source of cuddles and giggles, ice blocks and lollies, and to the older grandkids, a wonderful listener. Jill thoroughly enjoyed reading books to her grandchildren and never refused a punishingly long game of

Monopoly with grandchildren who were not old enough to play properly. She was always



Jill Hundy of "Windradeen"

up for a game of anything – she had the patience of a saint and always had time for them all.

She was an amazing woman, who would find the humour in many situations that others wouldn't; it was not uncommon to find her and her children in fits of giggles because of

something she had said, even when she was so very sick.

Although struck down by an insidious disease, Jill fought it with a quiet, calm dignity to the end. Whilst ever there were treatment options available, Jill was willing to try anything to remain with her family.

Jill never complained about the hand with which she was dealt and she stoically fought until she sadly passed away at home, surrounded by her family in May 2018.

A cornerstone not only to "Windradeen" but also our family, Jill is greatly missed.

Penny Hundy

ASWGA ANNUAL PHOTOGRAPHIC COMPETITION WINNER 2018

- CAROL PHILLIPS OR "GLEN STUART" TASMANIA

For some time, I have been taking pictures of everyday life on the farm. Through photos I am trying to capture how we manage our sheep, and showcase our property.

In a dry year like we have had, we find ourselves moving sheep regularly, to keep a fresh pick in front of the sheep, and allow the paddocks and runs to refresh and regrow.

Glen Stuart has many bush runs, and the sheep are often in small mobs scattered throughout the trees, hills and gullies. It is essential to count sheep into and out of paddocks/ runs to ensure none are left behind.

This photo, taken with my mobile phone, shows how routine this has become for the sheep and us.

The Annual ASWGA Photographic Competition is open to all ASWGA Members, their immediate family and employees.

Below: "Counting Sheep" by Carol Phillips of Glen Stuart, Tasmania



THE WIND THAT NEVER BLEW

Nature and the elements, changing for the worst and forcing humanity to adapt for the better.

Droughts, floods, storms and catastrophes nature's fury can devastate life, living and our future.

The Malcolm the weaver children's education project, supported by **The Society of Dyers and Colourists** (charity 212331), is aimed at teaching 4 to 8 year-old children about nature and our environment, about wool and weaving, about colour and how colour makes us feel, about air pollution, river and sea pollution, about the energy of the wind, and about the Moon and its power over the ebbing and flowing of the tides.

There is now a 'trilogy' of three books in the series, Weaver Of A Life In Colour; The Rainbow That Mixed Colours/The Moon That Shone Dark, and The Tide That Stayed Out/The Wind That Never Blew.

We are also working with a Scottish production company, **Once Were Farmers**, in Stirling, to create a pilot animation programme for **BBC Alba, "A Grey Day"**, to promote the education project around the world.

Children need to be aware of our changing world. In the words of Sir David Attenborough:

"Bringing nature in to the classroom can kindle a fascination and passion for the diversity of Life on Earth and can motivate a sense of responsibility to safeguard it"

- David Attenborough

Sir David Attenborough is a supporter of the Malcolm the weaver project.

Our children face a world which is changing at an amazing pace.

The way we live our life today will not be the way that our children live their lives tomorrow.

Since the first Merino sheep arrived in Australia at the end of the 18th Century, things have evolved and changed dramatically, and since Scottish lassie Eliza Furlong brought her Saxon Merino sheep from Germany, through Scotland, to Australia in 1829 - just look at the growth and then the changes.

An Australian flock which peaked at 180 million sheep and is now depleted to 40% of that number.

Animal welfare is now very much at the forefront and both land and soil control are playing a key part in developing the stock and the quality of fleeces for the future.

Fibre length, fibre crimp, quality and the outstanding whiteness of merino wool fleece is crucial to present garments and interiors in the most beautiful vibrant colours that the retail sector demands, and it is the knowledge of how to achieve these standards that have taken years to create, which must be passed on to the next generation.

What will the 4 to 8 year-olds of today be doing in ten, fifteen or even twenty years from now? If we do not educate them now, in noble natural fibres, in textiles, in colour, in nature, in the environment, then the future will indeed be blue.

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THE FEMALE PHENOMENON

FOOD FOR THOUGHT.

For the serious superfine breeder, a wander through Kelpie breeder Tim Austin's latest book, "The Female Phenomenon", may seem a strange place to be. Tim is recognised worldwide for his expertise in breeding and promoting the Kelpie breed of sheep dog. It would seem a long stretch to translate his thoughts on Kelpie breeding to the field of superfine wool growing. But to the persistent reader, Tim will explain the reasons why canny sheep breeders carefully select and keep key ewes in the core genetic pool of their studs.

Tim's semi-autobiographical book draws on a life spent learning from his family ties to influential sheep breeders in the Riverina and Western Victoria. He then links this with his experiences as a Kelpie breeder, particularly focussing on the impact of key females in his Kelpie stud.

Always keen to learn the reasons behind his experiences, he sought input from professionals who exposed him to the complexities of the passage of genetic material from generation to generation. At the flock level, the ram has considerable impact, but at the improvement in the individual animal, the ewe exerts her considerable influence. Tim has drawn attention to the functioning of the animal at the cellular level and further focuses attention on the energy production at this level. This he believes influences the impact of the females of mammalian species; in particular, the ewe and the bitch. His close observation of the impact of his breeding females on their progeny can now be explained in scientific terms, through the passage of the energy producing mitochondrial DNA passed only through the female line.

To say that Tim focuses heavily on the impact of the female of the species is an understatement. Knowledge of the female influence on the kelpies, reinforced by the family sheep breeding experience, has helped to place the Elfinvale kelpies into the premium position that they occupy.

The scientific basis for Tim's focus on the female of the species has been made clear by the work of Dr Jim Watts of SRS fame; Wilson & Cann, Sc. Am. 1992; Prof. Bryan Sykes, University of Oxford; Emeritus Professor John M Swan, Monash

University. Tim continues to upgrade his understanding of these processes, as he has issued an erratum to a key diagram in his publication to make his argument more cogent.

Tim has been vindicated scientifically for his focus on the female. In his journey, he has focussed on what many breeders have noticed; that the female in a mating program is at least equally important to the type of offspring that emerges, if not more so. Serious stud breeders have focussed on this for generations without having the scientific understanding to explain their actions. Valuable key females invariably die at home as the breeders seek the maximum returns on their genetic potential. Tim has delved much further and exposed the importance of the structures in the cells of females, in particular, the importance of the female mitochondria.

Tim has put his finger on the importance of mitochondrial DNA in the energy production of an animal. That this is transmitted through the female line in all mammals is an exciting

understanding. What many breeders forget is that the genetic contribution to offspring from the female side is greater than 50%, due to the genetic contribution of the DNA within mitochondria. Mitochondria are from the female line only; the sire contributes nothing with respect to mitochondria.

Time lines may be stretched, thoughts enthusiastically bounced round with the narrative weaving back and forth, but the essential truth is doggedly pursued. The female line is the principal one to be followed, as the energy source of the animal is inextricably tied to the mitochondria.

Ian Gill, 29.06.'18



SHEEP AND FLEECE YET AGAIN HEADLINERS AT THE SYDNEY ROYAL EASTER SHOW

It all began with a simple comment passed between two people over dinner.

“How good would it be to have a wool auction happen during the Easter Show?” was something like how the conversation went.

Little would the two wool industry figures know that literally a handful of years later, their kernel of an idea would see sales at the Sydney Royal Easter Show wool auctions explode to \$27M in 2018.

In its first year, 2015, the Sydney Royal Easter Show wool auctions brought in \$17,721.476M in sales. That rose to \$17,641.572M in the second year, \$20,560.309M in the third and this year \$27M worth of Fine Wool bales went under the hammer in just two consecutive days of The Show.

What began as the industry that carried Australia’s financial hopes and dreams in its early colonial days, has in recent years seen a more than healthy resurgence; a major contributor to that being the presence of buyers from China and Europe, all seeking the finest quality Australian Merino Wool.

While the Sydney Royal Easter Show continues to be the showcase of the Australian Sheep sector more widely, with every year producing either new classes, more entries in classes, or greater schools’ involvement in the sector, in tandem, the Merino Wool sector is thriving.

In fact, figures suggest wool prices for the last season were the highest in some 30 years.

Certainly, the Sydney Royal Easter Show’s two days of Wool Auction sales this year suggests the sector is humming on all cylinders.

There has always been a certain romanticism about Australia and its links to sheep and wool, particularly the Merino breed and its humble origins.



Judging at the Royal Easter Show

Those links stretch back to 1822 and a call for a gathering of graziers willing to become members of the Agricultural Society of NSW - now of course the iconic Royal Agricultural Society of NSW.

The 5 July, 1822 Prospectus outlining the Rules and Regulations of the brand new Agricultural Society of NSW called upon subscribing members to communicate and advise each other for the purpose - among other things - of improving animal breeds in the new colony, then just 35 years old.

It continued ...

“In regard to sheep, no country, in so short a time, and with such puny means, has improved its flocks so rapidly; for, with the introduction of only a very few Merino sheep, there are now entire flocks with fleeces little short of the Merino wool in excellence, and thousands and tens of thousands rapidly attaining to nearly equal merit.

With a small present of Merino sheep from His Majesty’s flocks, and the free use of the waste lands of the Colony, our wealth in sheep will be great indeed, and our exports of fine wool to the Mother Country a substantial benefit to her manufacturers ...”

In other words, the Merino was every sheep grazier’s benchmark and it hasn’t changed.

In 1821 the merino population had already grown to 119,777 in NSW.

At the 2018 Sydney Wool Auction at Sydney Showground, 13,135 bales were sold at an average \$2,058.54 per bale. Just 4.6% of bales offered were passed in. 2771 Lots



Judging at the Royal Easter Show

were offered by 479 growers.

There was great pre-auction talk and fervour around a single 1 PP rated bale and its potential price under the hammer, only for it to be passed in on the second day of the sales.

RAS President Robert Ryan OAM, himself a highly respected figure in the wool industry, says the growing success of the annual Sydney Wool Auction at the Royal Easter Show could very much be about the surroundings. “The Wool Auctions happen amongst the pulse and excitement of the annual Sydney Royal Easter Show”, he said. “The sights and smells and so many other activities to enjoy at the Showground, offer the Sydney Wool Auctions the perfect backdrop to showcase one of the chief reasons the Royal Easter Show was founded in the first place - sheep and wool”, Robert Ryan said.

Sheep and Fleece winners at the 2018 Sydney Royal Easter Show included (below);

FLEECE

GRAND CHAMPION MERINO FLEECE*

Nimmitabel Show Society (Fleece owned by John & Jenny Alcock) Nimmitabel, NSW

NSW/QLD CLASSES – CHAMPION SKIRTED FLEECE, MERINO**

J & C Chappell (Northern Districts) Dundee NSW

RAS/ASC WOOL ARTICLE/GARMENT COMPETITION STATE FINAL

B Wyles, E Brash, M McCutcheon, Kiama Downs, NSW

Group 5 South Coast & Tablelands (Robertson Show Society)

MERINO

SUPREME MERINO RAM & SUPREME EXHIBIT

Peter & Jayne Lette, Conrayn, Berridale NSW,

MEAT & DUAL-PURPOSE SHEEP

SUPREME LAMB EXHIBIT

Graham Gilmore, Tattykeel, Oberon NSW (Poll Dorset).

*The Fleece Competition held 19 March, 2018 saw 30 Exhibitors exhibiting 107 Fleeces

**The District Fleece Competition held 24 March saw 22 Exhibitors exhibiting 58 Fleeces.

RAS Members interested in exhibiting their wool as the Sydney Royal Easter Show can do so from November each year via: sheep@rasnsw.com.au.



POLYESTER: A MODERN DAY SCOURGE

While we in the wool industry pride ourselves on the sustainability and utility of our product, we also need to be looking outward at potential threats, not just to our industry, but to our health. One of the threats to our industry is, of course, cotton, which uses much water, fertiliser, chemicals and arable land - all of which could be used to grow food for an ever-expanding global population. The dyes that are currently used to dye cotton are loaded with toxic heavy metals, such as cadmium, chromium, lead and mercury and it is these heavy metals that currently pose a health risk to those who choose to wear coloured cotton. No doubt there are very clever chemists developing less toxic options and thus cotton is neither my major concern at present or the main topic of this article.

What is of far more concern to me, are the artificial fibres; especially polyester. The vast majority of polyester used in fabrics is made of polyethylene terephthalate, also known as PET, or in some circles PETE. I urge you not to get worried about the technical sounding name. One of the main aims of this article is to try to demystify the chemistry, so that we can get down to why it is, in my eyes and many others, problematic.

Most of the global production of PET, roughly 60%, is used as polyester fibre for clothing and other fabric-related uses, but I will also add that 30% of PET is used to make plastic bottles. I mention this now, because I am sure that once we get further into this issue, you will question the use of this

polymer to contain liquids bound for human consumption. Thus we expose our insides to PET via drinks and our outsides via clothing. Looking at it like this, we surround ourselves with this artificial compound when, in my opinion, this is not what we should be doing at all.

To explain why, we need to understand more precisely what PET, polyethylene terephthalate, really is and what happens to it once it leaves the factory. Firstly, let us deal with the polyethylene part of this compound. Polyethylene is a polymer. A polymer is a molecule made by joining up lots of smaller building blocks, which chemists call monomers. So polyethylene is a polymer made by joining up lots and lots of ethylene molecules - the monomer - making very long chains that are suitable for all sorts of purposes, including making artificial yarns that can then be made in to fabrics. The fact that it is a polymer is not relevant to the issues that I have with this chemical compound, it is the other bit; the terephthalate, and also the way in which the PET is manufactured.

I will deal with my concerns about PET manufacture first. Manufacturing PET requires the use of catalysts and the most common catalysts used to make PET contain the toxic element antimony. This antimony is found on the surface of PET and inside its structure, be it a fibre or a bottle. Any antimony on the surface of the PET can be removed by washing; I have yet to find out what happens to it after that. But antimony

inside the PET can diffuse to the outside of whatever is made with it, meaning it can then become dangerous. For example, fruit juice concentrates that were produced and bottled in PET have been found to contain up to 44.7 micrograms per litre of antimony, nearly 9 times the EU limits for tap water of 5 micrograms per litre! 9 times! To me, this is a worry.

Now to the terephthalate bit. Terephthalate is added to the polyethylene to increase the durability and flexibility of the end-product, PET. When it is part of the final product, PET, part of the polymer can be released into the surrounding environment as phthalates. It is these phthalates that I am most concerned about, and not just because they are difficult to spell and to pronounce.

Phthalates are now recognised as “endocrine disrupters”. An endocrine disrupter is a chemical that interferes with the normal functioning of hormonal systems. Interfering with hormonal systems can be diabolical to any organism, including humans. While the long-term effects of exposure to phthalates is not yet clear, phthalates have been implicated in all sorts of health issues, including undescended testicles in boys, obesity and insulin resistance in adults and damage to liver and testicles. These effects might be due to the anti-androgenic effect of phthalates (anti-androgenic means that it interferes with the natural action of androgens; the male steroids, such as testosterone). They have also been implicated in increased risk of asthma and

allergies. Studies have shown the not only can phthalates enter the body via food, including drinks, but by breathing and absorption through the skin. Whether these phthalates contribute to infertility is not yet known, but I have my suspicions.

The use of certain phthalates in children's toys has been banned in the EU since 1999. In the USA, the production and sale of children's toys containing more than 0.1% phthalate has been banned by section 108 of the Consumer Product Safety Improvement Act of 2008.

And yet people drink from PET and wear it as clothing. Studies have shown that three things increase the release of phthalates from PET; heat, sunlight and acidity. As a consequence, I never microwave food in plastics, avoid polyester clothing and keep all plastic drink containers out of sunlight.

But many people wear an awful lot of polyester clothing, meaning that they might be absorbing phthalates through their skin. Additionally, when a polyester garment is washed, it releases over 40,000 microfibers into the washing water. These microfibers are mainly too small to be picked up by the washing machines filter and so are released into the environment along with the waste water produced by the machine. Given that the majority of humanity either lives by

rivers, or on the coasts, these microfibers find their way into our waterways and eventually into our oceans. According to the scientific literature, these microfibers, when wet, produce chemicals that make them "smell" like food to aquatic and marine wildlife. The wildlife then eats it, thinking it is food, and gains no nutritional benefit from them whatsoever. There is already evidence of marine wildlife starving to death as a result of this and no-one knows what the effect of endocrine disruption on the marine ecosystems is or will be.

Surveys have shown that these microfibers are very widespread in the oceans and the rate at which they are finding their way into the oceans is increasing enormously year by year. Why are we not more informed about this potential danger to ourselves and the environment? We must remember that polyester and other plastics are all made from fossil fuels. So my guess is related to the lobbying power of the fossil fuel and associated multinational corporations. After all, they have way more power and influence than the tobacco industry ever had; and we all know how that story went.

So, in closing, avoid plastic bottles, if at all possible and wear wool!

Dr Jeff Gill

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BENEFITS TO SKIN HEALTH BY WEARING MERINO WOOL

Wearing Merino wool base-layers is beneficial to skin health compared to polyester, according to a new AWI-funded study. The aim of the research is to ultimately open doors to new high value markets for wool.

Did you know skin is the human body's largest single organ, covering an area of up to 2m²?

It acts as a physical barrier against the external environment, minimises water loss, regulates our body temperature, has antibacterial capacity, contributes to innate immunity and is key for sensory perception. Talk about multi-tasking!

With such a wide range of functions, the health of our skin is essential. And since our skin is generally in direct contact with fabrics, skin health is influenced by the fibre type of the fabric, as well as the fabric's structure.

NEW STUDY BACKS WOOL OVER POLYESTER

In a new study funded by AWI, researchers are shedding new light on this connection between what people wear and the health of their skin. Scientists from AgResearch tested human skin reactions to different fabrics – and initial findings show benefits for skin health from wearing the natural fibres Merino wool or cotton, compared to the synthetic fibre polyester.

"We set out with our 32 volunteers – 16 men and 16 women ranging in age from 25 to 63 – to look at how their healthy skin reacted to different close-fitting fabrics," said AgResearch scientist Dr Alex Hodgson.

"Part of the experiment involved the volunteers wearing Merino wool base-layer shirts, with a patch of polyester on one side of their upper back area, for a minimum of six hours during the day.

"We discovered that polyester tended to reduce the hydration of the wearers' skin and also – especially for men – resulted in increased redness or inflammation of the skin. By comparison, the skin covered with wool did not show any negative effects during the study.

From this we can see that wool promoted the maintenance of healthy skin, whilst polyester had a drying effect with some inflammation."

Merino wool and cotton performed similarly in this pilot trial. The findings support the premise that wearing natural fibres, such as Merino wool next to the skin, leads to improved skin health, and have encouraged the researchers to proceed with a second phase of the study. This involves a 'long-term' wear study, in which the volunteers wear the trial garments continuously for five days and nights. Extending the time that garments are worn may differentiate the skin hydration effects of Merino wool and cotton.

R&D BOLSTERS MARKETING

"Ultimately this work is about providing guidance or reassurance for consumers.

Our aim is that people will be able to make informed choices about what they wear, and what that might mean for the health of their skin," Dr Hodgson said.

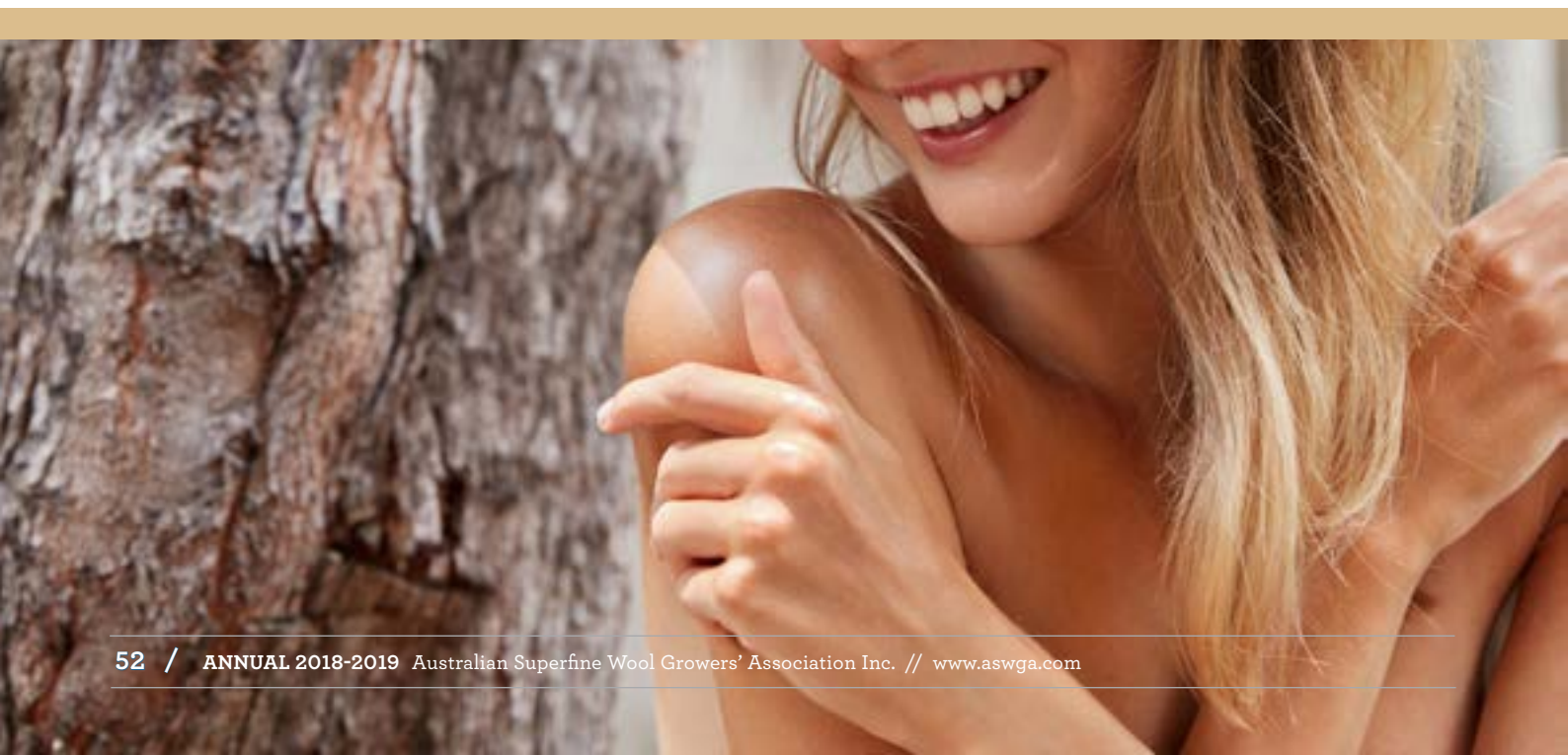
This will be music to the ears of Australian woolgrowers. It certainly is for AWI's Program Manager, Fibre Advocacy and Eco Credentials, Angus Ireland, who says the new research results lend significant weight to AWI's 'Fibre Advocacy' investment program, which aims to validate and communicate the health and wellbeing benefits of wool products.

"There is huge potential for Merino wool, because of the strong trend in consumer markets towards healthy and environmentally friendly products," he said.

"The work undertaken by AgResearch follows on from previous studies, funded by AWI, at the Queensland Institute of Dermatology and the Murdoch Children's Research Institute, that showed significant reductions in sufferers' eczema symptoms by wearing superfine Merino wool garments against the skin.

New analysis has also found no evidence that wool is an allergen, thanks to separate AWI-funded work.

"All these new research results will help enormously with our marketing, especially in sectors such as babywear, sleepwear and underwear, as well as base-layer active-wear," Angus added. "These are relatively new markets for wool, containing products that are used every day and can command a high retail price per kilogram of fibre used – which is good news for Australian woolgrowers."



CRISPR/CAS9 - A REVOLUTIONARY TECHNOLOGY

The last few years have seen the discovery and development of an exciting new genetic tool called CRISPR/Cas9, originally discovered in bacteria. For the more curious, CRISPR is an abbreviation of Clustered Regularly Interspaced Short Palindromic Repeats. A Short Palindromic Repeat is a short section of life's main genetic material DNA (deoxyribonucleic acid), that reads the same backwards as forwards. For example, in English, the words madam, racecar and kayak, are palindromes. In DNA, the main nucleotides that make up DNA, are adenine (A), guanine (G), cytosine (C) and thymine (T). So an example of a palindromic repeat in DNA would be AATCGCGTAGATAGATAGTGCCTAA, with the bolded "G" representing the point of reversal.

What is most important about this new technology is the Cas part of the CRISPR/Cas9. Cas is another abbreviation, this time for CRISPR-Associated System, and Cas9 is simply the most commonly used version of Cas. There are many more, starting from Cas1. I will not spend time explaining the different Cas molecules, but will focus on CRISPR/Cas9.

CRISPR/Cas9 is an enzyme complex. An enzyme is a biological catalyst. A catalyst is a substance that makes chemical reactions go faster. An enzyme complex is a collection of biological molecules that act together to cause a biochemical reaction to occur faster than it would without the enzyme; that is, if it would occur at all without the enzyme.

To work properly, the CRISPR/Cas9 complex requires a short section of RNA (ribonucleic acid), which is the "workshop version" of DNA. RNA is produced from DNA by other enzymes that we will not worry about for the time being. What is important about the short section of RNA that is required by the CRISPR/Cas9 complex is that it binds to a specific DNA sequence, and not to any other sequence. By binding to a specific DNA sequence, the short section of RNA guides the CRISPR/Cas9 complex to where the complex can do its job. And the job of the CRISPR/Cas9 complex is to cut the DNA at that specific site.

Once the CRISPR/Cas9 complex has cut the DNA, the cell's own DNA repair mechanisms kick in and try to repair the cut in the DNA. Without the addition of another piece of DNA, supplied by the scientists involved, the cell's DNA repair mechanisms, will hopefully repair the DNA and there is no change to the DNA. However, what the scientists

are generally trying to do, is to change the DNA sequence at that particular site. They introduce another piece of DNA, which is hopefully inserted at the site of the cut, changing the DNA sequence to that which is desired. And at least in theory, and often in practise, this is what happens.

Another way of thinking about this is to imagine a skilled tailor, either altering the stitching in a suit to alter its appearance, or in other cases, "letting-out" a jacket, or a pair of trousers, for a client who has gained weight. In this example, the changing the stitching is analogous to changing a nucleotide or two, and the "letting-out" is analogous to inserting some additional DNA sequence. The CRISPR/Cas9 complex is capable of making either of these changes. As such, it is, in my opinion, the most exciting development in molecular biology in decades.

This technology has the potential to "fix" many, if not all, genetic disorders in humans, such as haemophilia, spinal muscular atrophy, beta-thalassemia, cystic fibrosis, to name but a few. The CRISPR/Cas9 technology has already been employed in humans, in the USA to treat Hunter syndrome, and in China, in an attempt to cure cancers. It is also being trialled to genetically engineer mosquitoes so that they can no longer carry the malaria parasite. But it is its potential use in agriculture that has caused me to write this article.

The CRISPR/Cas9 technology has been very rapidly adopted by China, and has been employed in sericulture, to introduce resistance in silk-worms to nucleopolyhedrovirus, a virus that attacks silk-worms. The Chinese have also employed CRISPR/Cas9 technology to disrupt the FGF5 gene in cashmere goats, resulting in goats with more secondary follicles and faster fibre growth. I am sure that the significance of this is evident. And as previously mentioned, China has already applied this technology in humans.

Like all new technologies, the CRISPR/Cas9 technology has its "teething problems". One of the main concerns at present, and this is the one that has restricted its use in humans to date, is that it can bind to bits of DNA that you do not want to change, which has the potential to cause unwanted disease. This problem is being rapidly overcome, as research groups all over the globe have recognised the potential of CRISPR/Cas9 technology and millions of dollars are being thrown at the research by both government

and private research institutions. Some of the advances being made are due to the discovery of other Cas enzymes in various species of bacteria. Other advances are being made by genetically modifying the CRISPR/Cas9 complex itself, to increase the accuracy with which it will bind to the correct DNA target.

For wool growers, I can foresee many potential applications of the CRISPR/Cas9 technology. Firstly, it would be of great interest to see if disrupting the FGF5 gene, as has already been done in goats, might result in more secondary follicles and/or faster fibre growth in sheep. Given how closely related sheep and goats are, I think that this is most likely. What I do not know, is what effect this might have on fibre diameter or crimp. Another potential application is the introduction, or alteration of genes that confer resistance to internal parasites, or indeed, external parasites, such as lice, mites, or blowflies. It might well be possible, in the future, to genetically alter the flora of the rumen, so that sheep release less methane. The genetic modification of crop and pasture species is already under investigation.

One factor that limits the application of this exciting technology, is that it requires precise knowledge of the DNA sequence of the genome of the organism that scientists wish to work on. This is one area that I would encourage all wool growers to think about; the importance of having accurate genomic information for the Merino.

Dr Jeff Gill

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SHEEP CRC 2018

Take the guesswork out of genetic selection with DNA Flock Profile and RamSelect

The guesswork is being taken out of genetic selection for superfine wool production, with the Merino Flock Profile Test, linking with RamSelect, for producers to make more targeted ram purchases and to track the genetic progress of their flocks.

Developed by the Cooperative Research Centre for Sheep Industry Innovation (Sheep CRC), the Flock Profile test involves randomly sampling 20 young ewes from a commercial flock, for DNA testing. It uses genetic links with animals of known breeding values, from the industry's Information Nucleus database, to estimate the genetic basis of the commercial flock.

Using the same scale as Australian Sheep Breeding Values (ASBVs), the test provides flock average breeding values for yearling weight, fleece weight, fibre diameter, staple length and eye muscle depth, as well as the indices for Fibre Production, Merino Production and Dual Purpose.



Rick Robertson

Sheep CRC chief executive James Rowe said the tool was becoming increasingly popular with Merino breeders seeking to add precision to their ram selections, by gaining a better understanding of their flock's strengths and weaknesses.

"Use of the DNA Flock Profile test has really taken off in the last six months as more and more Merino producers see the value of independent and objective measures of their flock's genetic merit", Professor Rowe said. "It has been particularly encouraging to see traditional sectors of the industry incorporating DNA testing and RamSelect into their systems."

A good example of the interest in flock profiling, was the record 65 people who attended the Doug Bicket Memorial Ewe Trial in Parkes earlier this year – double the number which normally attend – after the ewe trial incorporated Flock Profile testing and feedback for all entrants.

Gippsland Merino breeder Rick Robertson, of 'Gracemere', Bairnsdale, was one of the first sheep producers to invest in the test after its commercial release and has used the information to adjust his approach to ram purchases over the last two seasons.

"For not a big cost of \$800 (ex GST), the test provided me with a clear, independent picture of where my flock is at compared to the national industry", Mr Robertson said. "DNA doesn't talk your flock up – it just shows you your strengths and weaknesses, which is pretty powerful information for making better genetic selection decisions."

"I found it particularly useful in that I'm no longer trying to select rams that can improve every trait, which is a really big ask. I've got good figures for growth rate and I can now

put that aside for the time being and really focus on improving our fleece weight."

Mr Robertson's ram team information has been entered into a RamSelect user account, with the team's ASBVs significantly better than the ewe flock's benchmark figures provided by the DNA Flock Profile test. Tracking the flock in RamSelect is demonstrating that those superior genetics are already delivering improvements.

RamSelect.com.au allows ram buyers to find and rank rams based on ASBVs that match their own breeding objective. Sheep producers who purchase a \$25 user account (free for DNA Flock Profile test users) can store ram team and Flock Profile information and track their genetic progress over time against national averages for a range of traits.

Pooginook Merino stud manager John Sutherland said the power of Flock Profile and RamSelect lay in their ability to separate performance successes, or failures, that were caused by management or nutrition, from the true genetic potential of a flock.

"I think the Flock Profile Test is a real commercial breakthrough for sheep breeders – just a great innovation. The response from our client properties, both within Paraway and externally, has been great, and a number of producers I know are now interested in trying it themselves."

"The Flock Profile allows people to better understand their genetic position and fine tune their ram selection and management strategies accordingly."

"Used together Flock Profile and RamSelect are very powerful tools, but it's most important to us that their use is balanced against visual selection of non-measurable traits, as well to ensure we breed a Merino that thrives in the natural environment."

"Over time, it's a very good investment for the information you are receiving. The impact of the information should start to happen the very next ram selection and mating – it won't be hard to get your money back from that investment."

Both Mr Sutherland and Mr Robertson plan to repeat the Flock Profile test in three to four years' time to understand the impact of the strategic changes to genetic selection and management made as a result of the DNA Flock Profile testing.

- More information is available at www.sheepcrc.org.au.

Media contact:
Michael Thomson, 0408 819 666



John Sutherland Pooginook



RESPONDING TO STRESS IN TOUGH TIMES



NATIONAL CENTRE FOR FARMER HEALTH

Living in rural Australia can be very rewarding. However, farming, in particular, can be a stressful occupation. The challenges faced in a rural farming environment include extreme climatic events, market forces, social and geographic isolation, reducing services and long working hours. Keeping yourself in a fit state to enjoy the good times is important. Keeping yourself in a fit state to weather the difficult times is even more important. After all, the most important asset on any farm is the people.

Everyone reacts differently to stress. Learn to recognise your stress triggers and develop strategies ready to use. When faced with ongoing stress, we tend to neglect the very things that would help us get through it, such as our relationships, quality sleep, recreational activities and our health. Neglecting these important facets of life can lead to poor business decisions. Research

involving over 2000 Australian farmers found that over 90% of them agreed that improving their health helped them to make better business decisions.

We know that people in the farming community are renowned for their willingness to help others—it's what keeps small communities alive. Talking through


issues with family, peers or professionals (for example, Rural Financial Counsellors) who are able to share their experiences and skills, can lead to new insights and new strategies to deal with challenging circumstances.

There is no 'one size fits all' solution and you may have to make an ongoing effort to find support that suits your needs.

KEY TIPS FOR TOUGH TIMES

- Eat healthy, nutritious food (avoid sugary, high salt and fatty foods)
- Get adequate sleep (7-8 hours per night)
- Keep physically active
- Make time to get off the farm (even for a couple of days)
- Find things to laugh about
- Allow yourself time to do something you enjoy. A short walk, sitting with a cup of tea, a hit of golf, or some deep breaths—these can change the path of the day
- If you need help please seek it

(Source: Managing Stress on the Farm, National Centre for Farmer Health)



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AWEX 2018



WOOLCLIP – FAST FORWARDING WOOL'S FUTURE

In its 25th year, AWEX continues to push the boundaries and deliver on the company's 'We know wool' promise to benefit growers, classers, brokers and all stakeholders throughout the industry.

Introducing WoolClip, the secure new way to keep key partners in-the-know about vital on-farm bale source and detailed clip information. Essentially, it increases supply

chain efficiency and traceability to give users a greater edge.

From in-shed to the end of the wool pipeline, the WoolClip app and web tools keep users ahead in a fast paced and competitive global industry. It's the fast, free, fully mobile responsive way to specify, declare and be RFID (Radio Frequency Identification) ready.

The grass-roots innovation delivering secure collaboration

WoolClip is a simple to use intuitive program. Establishing one secure source of truth, it promotes unprecedented two-way upstream and downstream collaboration.

A standout feature is the ability for classers and growers to collaborate on the shearing job or whether they are present in the

shed or on their mobile. The ability for brokers/agents to download the wool clip specification data will add efficiencies to the industry whilst increasing the speed in which wool can be processed and ready for sale.

With WoolClip, the classer or grower can quickly enter mob details; essential for creating bales, lines, and for providing National Wool Declaration (NWD) information for the automatic calculation of Mulesing Status (MS) and Dark and Medullated Fibre Risk (DMFR) ratings against each line of wool.

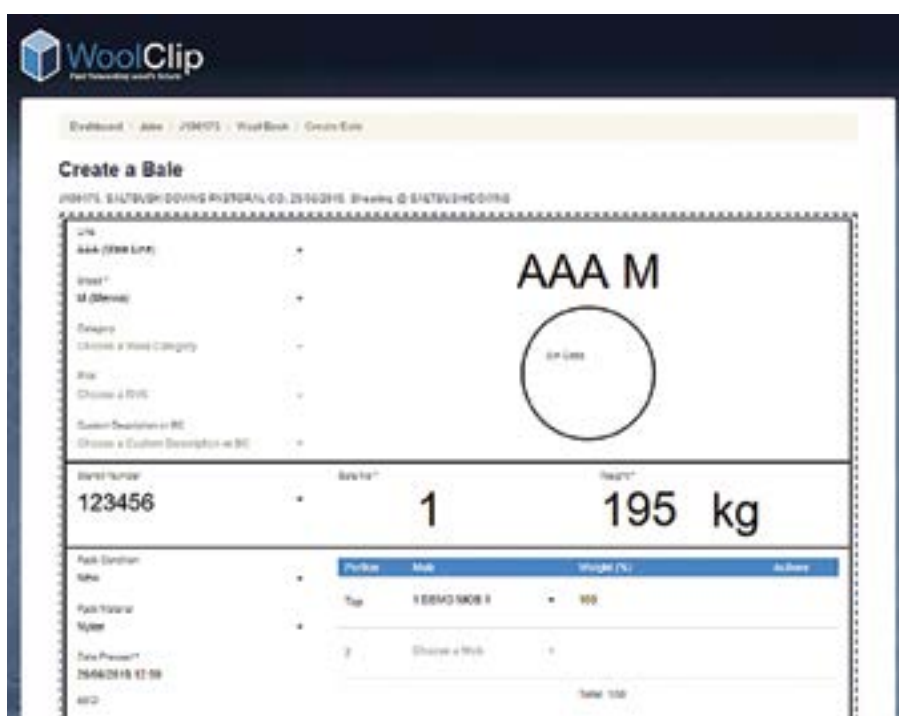
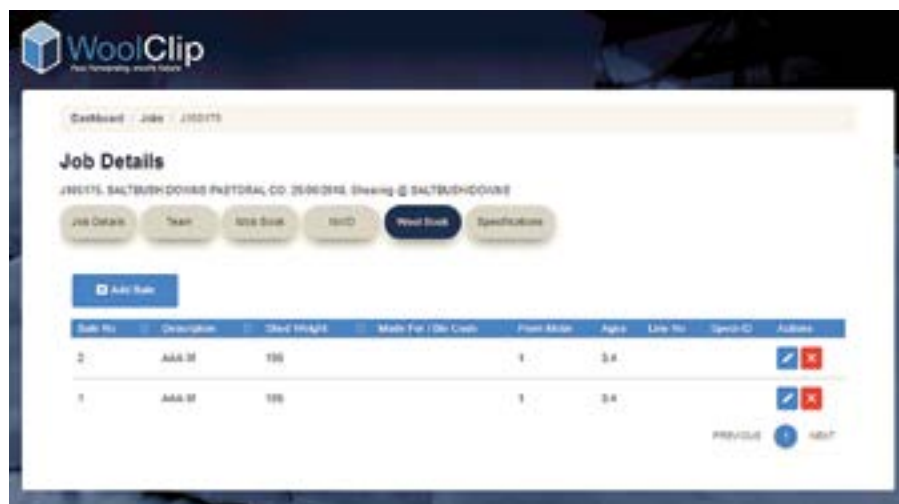
Clearly defined provenance online or offline

Future-friendly features include rapid mobile scanning and entry of RFID enabled e-packs. WoolClip's capability extends to working online and offline in remote locations. It can be accessed and updated via a web browser and mobile devices such as a smart phone.

Continuing to deliver what the world's demanding

All of which makes WoolClip an integral part of the future of the wool industry, creating greater transparency, accuracy and efficiencies. In short, Woolclip has great potential to deliver the cost-efficient collaboration and accurate traceability the world is demanding. Imagine the competitive advantage of managing an entire clip in a few clicks.

AWEX has also created WoolClip training on a separate website and app so that those new to WoolClip can learn in a safe and secure training environment.



Simply download the free WoolClip and WoolClip training apps from the Apple APP STORE or the Google PLAY STORE. Visit www.woolclip.com.au

NWD: SUPERFINE WOOL LEADS THE WAY

Wool growers of superfine wool have been leading the industry in promoting the attributes of their wool for many years. In addition they continue to lead the industry in declaring their wool for mulesing status for close to a decade. The National Wool Declaration, for mulesing status, was introduced in 2008 with the NWD on-farm Integrity Program (NWD-IP) commencing in 2010.

AWEX 2018

NWD Declaration Rates (%) by Mulesing Status by Season

Figures based on % sum of bales, all breeds & wool types, first-hand offered, P&D Certificates



%	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
NM	3	4	6	6	6	6	7	9	10	12
CM	3	3	3	2	2	2	3	3	3	3
PR	3	5	8	12	14	14	19	23	28	32
M	29	25	25	24	23	21	21	20	21	20
ND	62	63	58	56	55	58	50	45	39	34
Aust. Clip	38	37	42	44	45	43	50	55	61	66
Total Bales	1,416,656	1,467,058	1,589,514	1,456,151	1,598,009	1,452,077	1,617,165	1,487,894	1,539,608	1,592,684

Now in 2018, there is wide spread acknowledgement of the value and benefit of the NWD-IP by stakeholders throughout the wool pipeline.

In terms of value/benefit, the declared status is easily measurable in terms of price points and something that is rarely seen by the wool grower is the demand from companies that require Certificates of Mulesing Status for their downstream clients. AWEX receives these requests for independent and transparent information, not as one-off requests, but regular weekly, sometimes daily, requests to give the customers in the supply chain confidence in the products they have bought and in turn are meeting the demands of their customers.

Superfine wool growers have been leading the way in providing open and transparent information because they understand the value and clear benefit of an informed market.

In a competitive market, transparency, integrity and independent information are highly valued.

To ensure that the Australian wool industry maintains the confidence of its buyers and customers it is important that the integrity of the declarations are maintained.

AWEX plays its part by delivering the Integrity Program where, 225 properties are inspected annually, 1,000 NWDs are reviewed and audited pre-sale and 200 Pain

Relief declarations are validated.

Where there are changes to the declaration status of a line of wool or clip (non-compliance), the processed information is communicated directly to the Grower, AWTA, Broker and Buyer(s) presale or to the Buyers of wool post sale (if sold). If the non-compliance of the Mulesing status is impacting on a Buyer's specific order, Buyers have been rejecting the lot based on the new information.

At all times it is the integrity and accuracy of the information that is critical to a Buyer making their purchasing decisions.

NWD Adoption Rates (%) by Micron for Season 2017

Figures based on % sum of bales, all breeds & wool types, first-hand offered, P&D Certificates



%	<18.6p.m Merino		<18.6 - 24.5p.m Merino		>24.5p.m Non Merino		All Breeds	
	No Bales	%	No Bales	%	No Bales	%	No Bales	%
NM	53,394	11	58,627	7	70,444	29	182,465	11
CM	12,146	3	20,141	2	8,442	3	41,002	3
PR	192,824	41	287,566	33	22,535	9	502,925	32
M	84,329	18	186,942	21	52,185	21	323,456	20
ND	126,062	27	324,391	37	92,409	38	542,862	34
Total	468,755	100	877,667	100	246,015	100	1,592,710	100



Red deer are one of six species of deer currently living within Australian landscapes - image by Peter Tremain

NEW SOLUTIONS TO TARGET PEST AND WEED PROBLEMS

The newly formed Centre for Invasive Species Solutions – a 16 partner collaboration between government, industry and research organisations - recently launched its first collaborative pest animal research, development and extension (RD&E) portfolio.

The Centre is taking the best of the Invasive Animals CRC forward and is focused on ensuring transformational and on farm outcomes for the agriculture sector. A total of 21 projects have been developed in consultation with members and partners and will focus on key invasive species problems such as pest rabbits, foxes, wild dogs and feral deer, an emerging threat in several regions.

The initial portfolio is worth a combined \$48 million of direct investment and in-kind support, including a \$20 million investment from the Australian Government and further \$4 million of direct funding from Australian Wool Innovation and Meat and Livestock Australia. The projects have been developed in collaboration with the priorities of our members and partners and with the

end-user, including superfine woolgrowers, at the front of mind.

Danny Picker, President of ASWGA said that wool production needs to meet the demands of international customers for a world class product backed by world-class environmental and sustainable management practices.

“I am extremely supportive of the Centre’s continuing work and development of an innovative RD&E program to ensure effective and appropriate strategies are developed to tackle the invasive species problems that woolgrowers face.” Mr Picker said.

A core driver of the Centre’s first portfolio is to deliver new humane and cost-effective tools to the pest management toolbox.

Projects relevant to woolgrowers include:

1. Strengthening the pipeline of new rabbit biocontrol agents from within Australia and internationally, including progressing registration of RHDV2.

This project is part of a 20-year rabbit biocontrol pipeline, which in phase one,

included the roll out of a new calicivirus strain, known as RHDV1 K5. The strain was released at more than 350 sites across Australia in March 2017 and delivered positive on-ground outcomes for growers across Australia.

Over the next five years the Centre will be developing new strategies to ensure coordinated and controlled rabbit biocontrol across the country. This includes the proposed registration of RHDV2 so that it can be legally distributed and used as a biocontrol agent. RHDV2 is exotic calicivirus which was first discovered in Australia in 2015. RHDV2 has been shown to be extremely effective at killing rabbits and the intention is to develop this strain as a product for on-farm use, ensuring it is able to be used as a coordinated rabbit management tool.

2. Demonstrating the productivity and biodiversity gains from best practice wild dog management

Like rabbits, wild dogs remain a major concern to wool growers. To continue his

role in promoting coordinated regional wild dog management, National Wild Dog Management Coordinator, will be supported over the next four years by Australian Wool Innovation Ltd, Meat and Livestock Australia, WoolProducers Australia, Animal Health Australia, Sheep Producers Australia and the Cattle Council of Australia.

Over the next five years this role will be working with various impacted stakeholders to implement effective strategic wild dog management policies and programs across the country so there's no loss in the current momentum being built in the sector.

Along with this coordination role, the Centre is funding large scale projects to enable more cost effective long term wild dog management. This includes large scale aerial baiting programs across different landscapes in NSW, as well as Cluster Fencing in western QLD, and regional management in WA.

3. Best practice management of wild deer and a better understanding of the role of feral deer in the transmission of disease to livestock

Deer are major problem for many growers in Australia. In response to feedback from Superfine Wool Growers, land producers and governments, the Centre will be funding work to evaluate and develop the most cost-effective methods and strategies for managing feral deer in a range of environments. There are more than six deer species in Australia and a one size approach won't fit all so it is a goal to ensure the development of regionally specific management options for feral deer. From a biosecurity perspective, the Centre will also be funding a specific study looking at the role deer may play as a potential vector for exotic diseases to livestock, using foot and mouth disease as an example.

4. On-line delivery of best management guidelines and mapping and planning tools through updated PestSmart and FeralScan digital platforms

The Centre's grower-friendly premier digital platforms, PestSmart and FeralScan will be getting major upgrades over the course of the next few years and producer groups will

be consulted along the journey to ensure further development of digital tools will be of value. Ensuring quick and easy access to extension materials which provide best practice information is paramount.

5. Development of a 10-year weeds RD&E investment plan

To ensure new and innovative weed management solutions continue to be developed through a nationally coordinated program, the Centre will also be developing a weeds RD&E investment plan

The Centre is very excited to officially start the first RD&E portfolio of projects and you can find out more about each specific project via our website - www.invasives.com.au



A pest rabbit caught on remote camera eating RHDV1 K5 laced oats four hours after they were put out. Based on the data sent in from release sites, RHDV1 K5 was shown to have a 39% observed reduction in rabbit populations.

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SCIENCE AGAIN BACKS SLEEPING IN WOOL

A new AWI-funded study has investigated the effect that wool, cotton and polyester sleepwear each have on the sleep quality of older adults (aged 50-70) under warm conditions. Consistent with previous research in relation to younger adults, the new research found that a better night's sleep is achieved when sleeping in wool.

Shifts in global demographics are working in favour of the wool industry. One aspect of this is the growth of the 'working age empty nester' segment – those older adults who are maintaining income (by working later in life) but have fewer dependents (their kids have left home) and hence have higher than average disposable income.

As their bodies get older, people in this segment have changed their consumption patterns towards things like fitness and health care. As we all know, there are plenty of negatives associated with an aging body (many of them involving gravity!), but one aspect of note for this article is that quality of sleep tends to decrease with age.

The sleep of older adults, compared to younger adults, is more fragmented and lighter, with reduced duration of deep sleep. Furthermore, warm environments easily disrupt sleep and this is especially the case in older adults, who have been shown to have poorer thermoregulation than younger adults.

Sleepwear plays several crucial roles in thermoregulation. Fabrics made from natural fibres allow higher rates of heat and moisture transfer than synthetic fibres, thereby promoting thermal comfort. A dry wool fibre, for example, absorbs moisture vapour up to about 35% of its dry weight in saturated air, whereas cotton can absorb around 24% and polyester fibres below 1%. The effects of sleepwear fibre type on the sleep of older adults have never previously been studied. AWI therefore recently funded a study by the University of Sydney, to compare the effect on sleep quality of

wool, cotton and polyester sleepwear, in warm conditions (30°C and 50% humidity) for participants aged 50-70 years old.

Thirty-six healthy participants (18 males and 18 females) participated in the trial with polysomnography, skin temperature, microclimate temperature and relative humidity measured. They completed four nights of study. Sleepwear fabrics of either single jersey Merino wool, cotton or polyester were used. The sleepwear was long sleeve tops and long pants – participants slept without a blanket or a sheet.

THE RESEARCH RESULTS

Sleep benefits for wool compared to cotton and polyester sleepwear were observed during the study. The key findings were:

- Sleeping in wool resulted in less fragmented sleep, compared to sleeping in other fabrics, especially between wool and polyester sleepwear.
- Sleeping in wool reduced the time taken to get to sleep, compared with sleeping in cotton and polyester, for older participants aged ≥65 years.
- Sleeping in wool resulted in less total wake time for poor sleepers after sleep onset, compared to sleeping in cotton.

Overall, wool performed better than cotton and polyester for the majority of sleep quality parameters.

COMPREHENSIVE BODY OF RESEARCH

With older adults willing to spend above average on products that will maintain their health, the big characteristic of these products that these people want is quality –

'less but better' – which is perfect for wool.

Furthermore, higher average summer temperatures and the frequency and intensity of hot days are now observed in Australia and globally. The use of air-conditioning to control temperature has financial and environmental costs and is also associated with negative effects on human health.

"It is therefore of interest to investigate alternative healthy, environmentally-friendly and cost-effective strategies for older adults to cope with sleeping under warm ambient conditions," says AWI Program Manager, Fibre Advocacy and Eco Credentials, Angus Ireland.

"A previous AWI-funded study, undertaken by the University of Sydney, investigated the influence of sleepwear on the sleep quality of healthy young participants – it found that wearing Merino wool sleepwear significantly reduced the time for the participants to fall asleep, thereby tending to increase total sleep time.

"And this new study, focused on older adults, has also shown that wool sleepwear promoted higher quality of sleep than either cotton or polyester sleepwear.

"The great value of these research investments on behalf of Australian woolgrowers, is that we are now building a very solid and contemporary body of scientific evidence which supports claims that wool is beneficial to a good night's sleep, which should help build consumer demand for wool."

While this study has shown wool sleepwear promotes better sleep at the higher ambient temperature, particularly in older adults and poor sleepers, future studies may also identify benefits of sleeping in wool for people such as menopausal women who often experience hot flushes and disturbed sleep, and shift workers who have disrupted circadian timing.

Noel Henderson

PHOTO: Newton Daly



WOOL PRODUCT WELLNESS

Wellness has become a popular buzzword in recent years, opening up opportunities for the development of new international markets for wool products. A major focus of AWI's Fibre Advocacy program is proving and communicating the health and wellbeing benefits of wool products.

AWI has been ramping up the rate of research into wool's wellness attributes over the last 7 years and these studies are confirming the benefits of superfine Merino wool in next to skin baselayer products.

SKIN HEALTH

Eczema is a skin disease which affects a significant and growing proportion of populations in Western countries.

Research undertaken since 2011, in relation to both infant and adult sufferers of eczema in Australia, has shown positive therapeutic effects on participants. The studies concluded that traditional management guidelines for eczema should be modified to include superfine Merino wool as a recommended clothing choice.

However, for the research to gain more traction globally, it's important that similar studies be also undertaken in key markets for wool. AWI therefore funded a study in the USA. The research team at Dermatology Specialists Research in Louisville, Kentucky, recently completed a two-year study to evaluate the effect of wearing superfine Merino wool clothing, versus 'standard clothing', when worn by adults and children (aged over 5 years) with eczema. The study also assessed the effect on the participants' quality of life.

The 50 participants were split (randomised) into two groups. The first group was dressed in their current 'standard wear' and at six weeks changed to superfine Merino wool garments. The second group began with the superfine Merino wool and crossed over to their current 'standard wear'. Participants were monitored over 12 weeks, with researchers assessing clinical, physiological and quality of life measures at 0, 3, 6, 9 and 12 weeks.

There were significant decreases in mean Eczema Area & Severity Index (EASI) scores for all participants from Week 0 to Week 3. Those who switched to Merino wool at Week 6 experienced a significant decrease in EASI scores, in contrast to those who switched to regular clothing.

The Dermatology Life Quality Index (DLQI) scores significantly decreased (the lower the better!) when Merino wool was worn over the first six weeks of wear, i.e., from Week 0 to Week 6 in the 'wool first' group, and from Week 6 to Week 9 in the 'standard clothing first' groups – see Figure.

"I really liked the wool clothing, it's comfortable and absolutely made my skin feel better; I still wear it one year out from the end of the study."

US eczema study participant

With the Australian-based studies of wool and eczema showing clinically significant benefits and now this US-based study,

AWI's Board has decided to ramp-up the rate of research by undertaking a multi-site, parallel study in the US, Europe and Asia. Confirming wool's benefits across these different geographic and climatic zones and across the different skin types will enable strong marketing of wool as globally beneficial to eczema.

SLEEP HEALTH

A three year AWI-funded study investigating the effect of wool, cotton and polyester sleepwear on older adults (aged 50-70), sleeping in warm conditions (30°C), has recently been completed by the University of Sydney. Consistent with previous research in relation to younger adults, the new research found that a better night's sleep is achieved in wool.

The sleep of older adults, compared to younger adults, is more fragmented and lighter with reduced duration of deep sleep. Furthermore, warm environments easily disrupt sleep and this is especially the case in older adults, who have been shown to have poorer thermoregulation than younger adults.

Sleepwear plays a crucial role in thermoregulation. Fabrics made from natural fibres allow higher rates of heat and moisture transfer than synthetic fibres, thereby promoting thermal comfort.

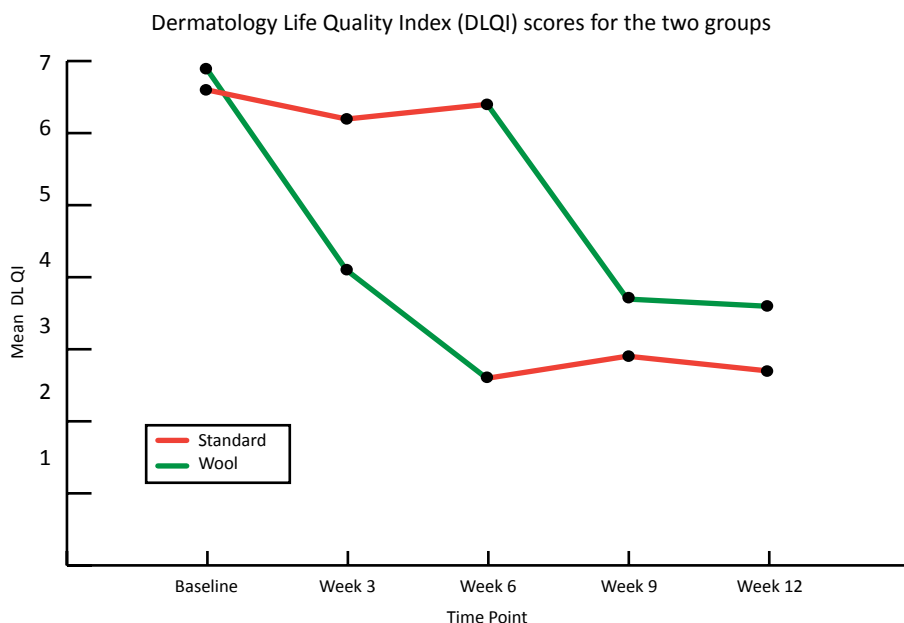
In this study, 36 healthy participants joined in the trial with polysomnography and skin temperature, microclimate temperature and relative humidity measured by iButtons. After an initial adaption night, they completed a further three nights of study in each of wool, cotton or polyester sleepwear.

The key findings of the trial were:

- Sleeping in wool resulted in less fragmented sleep compared to sleeping in other fabrics, especially polyester.
- Sleeping in wool reduced the time taken to fall asleep compared to sleeping in cotton or polyester sleepwear for participants aged >65years.
- Sleeping in wool resulted in less total wake time for poor sleepers after sleep onset, compared to sleeping in cotton.

Future studies may also assess the benefits of sleeping in wool for people such as menopausal women, who often experience hot flashes and disturbed sleep, and shift workers, who have disrupted circadian timing.

Noel Henderson



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WoolClip is the 'must have' to record and improve the speed and accuracy of your shearing information from farm through the wool pipeline.

With Woolclip you can; create a job, add mobs, add bales, complete the NWD and create a data-speci whilst retaining all traditional printed functionality.

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Simply go to www.woolclip.com.au - If you are a registered Wool Classifier use your current username/password to access WoolClip as a pre-approved user. To register as a Wool Grower click the "Create Account" button and follow the prompts.

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Collaboration - The Classifier and the Grower can work together to complete the shearing job on time, every time.

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