Sheep NewZ #27 Winter 2022

NEW ZEALAND SHEEPBREEDERS ASSOCIATION TH

Hello Members,

Thanks to all who submitted items. Would be a short newsletter, mainly ads, without you. Hopefully the next issue may have some show photos – if not in September, then December.

Just been down to Timaru for the NZ Clydesdale Horse Society AGM & Field Day. We managed to arrange a Ryeland Society Annual meeting. Our few NZ flocks are rather scattered, but one breeder come from Dunedin, one from Gore, one from Christchurch and two from the Wairarapa plus partners.



Ryeland breeders at AGM. Yours truly on the right in the red jersey – I can see a diet coming up for me!

Ryelands are great sheep but like several other breeds, NZ is in danger of losing them altogether as most of our long-time breeders are approaching retirement from their farms and lifestyle blocks. One is slowly establishing a coloured Ryeland flock alongside his white animals. The coloureds are comparatively rare in NZ – personally we've only had about 3 in 30 years of breeding. They sell like hot cakes in the UK.

Covid has certainly mucked things up in the livestock breeding and showing world, with some of the A & P shows in danger of folding completely if they get cancelled again this year.

In April Warwick and I went down to the belated Martinborough Fair. While cruising the many stalls I came across three featuring NZ wool products. I asked for their contact details. Only one has responded so far. I have put in an article Tara sent me with some photos. It is great to see what an innovative young mother is doing, creating useful, attractive new items out of those no longer required. Wool is definitely a sustainable fibre/fabric.

Helen McKenzie Editor Tali (06) 372 7842 or Email: <u>rosemarkie@wise.net.nz</u>

ASSOCIATION NEWS & VIEWS

From The President

Hello and welcome all members to the Winter edition of Sheep Newz. The Autumn months leading into Winter have been very kind in our part of NZ, warm weather with great Autumn growth. Although by the look of other



parts of the country we may be fortunate, especially in the Waikato and Southland. These usually summer safe areas look as though they have been through a Canterbury drought! – our thoughts are with you, and here is hoping you all get some meaningful rain and mild growing conditions over the next couple of months.

Pregnancy scanning is under way in our area and speaking to a scanning contractor the percentages are way ahead of last year and ewe weights also well up -5-10 kgs in most cases. Lamb prices remain very good which bodes well for the winter contract lambs and has given everyone in the lamb trade a much-needed confidence boost. The feed bank that has been built up in Canterbury has ewes looking very good going into winter and in great condition for lambing. A lot of mobs of hoggets are averaging over 50kgs which is also good going into winter.

The Covid still lurks about us but people are getting out and about with a bit more freedom. I attended the Corriedale AGM/Fielday last week with a tour of Graeme and Penny Griggs commercial Corriedale property in Rotherham, Amuri Basin. This was followed by the AGM held at Charles and Emma Miller-Browns property at Glenmark Drive, Waipara, followed by an inspection and discussion of the trial ewe lambs. Then on to the Berry family's winery Waipara and ended up with a meal at the Nor' Wester Café in Amberley.

This issue features the Merino breed. What an iconic New Zealand breed this has become. From the first Merino's landed in New Zealand by Samuel Marsden in the early 1800's to the present day these sheep have had a big influence on the whole New Zealand sheep industry, not only as a pure breed, but the subsequent crossing with English long wool sheep to produce sheep of the likes of Halfbreds and Corriedales. The wonderful wool the Merino produces is vastly underrated, but in the last few years this fibre is finally getting the recognition it deserves and with the planet wanting more green alternatives Merino wool is leading the way. Good on the Merino breeders of New Zealand for their fortitude and resilience in producing such a great product.

The Government is still floundering along. The Three Waters debate must be of concern to all New Zealanders - on what mandate does this government think that this is a viable sustainable piece of legislation? This concept must be lobbied against at all levels!

All the best for the winter months.

Tom Burrows
President NZSBA



From The General Manager

Having just returned from Melbourne catching up with my daughter I can report that life over there is relatively normal. Masks are worn by only those who feel compromised. Normality!

The office this time of year is swamped by Annual Returns, and these are then checked and the 2022 Flock Book is updated.

NZSBA Annual Returns – REMINDER - now due, please get them into the office as soon as possible as I always receive a list of overdue names of members which I then ring up which is time consuming. Interesting, usually the same names. Remembering your annual return in short is just number of ewes to what ram(s) used and updating your contact details if required – not too difficult.

Breed Committee meetings are happening in June and July. The problem being it is still very difficult to find meeting rooms as the MIQ hotels are undergoing refurbishments.

Most breeds have opted for a meeting rather than a conference this year with the view that 2023 will be the year they can meet.

However, some breeds have had outings.

The Corriedales recently held a field day in North Canterbury, visiting a couple of farms, a winery, followed by a meal in Amberley. The weather was great, and the day really worked for the breed. The English Leicesters met recently at Bob & Anne Todhunter's and enjoyed a lovely day at Cleardale with the splendid Rakaia Gorge as our backdrop.

The Valais Blacknose held an AGM in Wellington and held a felting workshop on Sunday.

The Charollais met in North Canterbury for a day and half, and the Ryelands held a meeting in Timaru. All participants really appreciated a face to face rather than a remote catch up. **Youth Initiative** - The NZSBA Youth Initiative to date has 15 flocks. Remembering, to qualify a young breeder needs to be between 10 -21 years old and have less than 50 ewes. This means they are exempt from all fees (subscription, breed levies, maiden ewe fee) except activity fees such as registering a sire, transfers.

Currently we have 2 Shropshire flocks, 5 Suffolk flocks, 2 Poll Dorset flocks, 1 South Suffolk flock, 2 Texel, 1 Dorper flock, and 2 Valais.

For Sale – website – should be online in a few weeks. Sellers will be able to open an account. The office then approves them, then they submit their ad, and again the office has to approve before it goes online.

NZSBA Website – Breeds should continue to check your webpage and make amendments when necessary. Any photos/news/stories about your breed, please contact the office.

NZSBA – Please members if you want your organisational body to lobby government regarding any issues, please contact either the office and or your breed committee with your concerns. The new laws on docking, and live shipments are recent laws which have some members now concerned with the NZSBA lack of support.

The Council needs to be contacted about your concerns, so we can put a document in front of government with objective and scientific reasons why we disagree with any intended law change.

Commemorative Jerseys - for sale – WINTER IS HERE!! Cost of Jerseys – Men's - \$170.00 – Ladies - \$135.00 and these can be posted anywhere in New Zealand. Check out our website for more details.

Tag Discounts - Shearwell, Allflex, Datamars (includes Zee Tags and Tru-Test) - Now offering discounted tags to members. When ordering please state you are a member of NZSBA, and they will send the product to you, but will send your invoice to our office, and we will then invoice you.

To our sponsors thank you for your continued support, and a big thank you to Helen who puts this newsletter together.

Greg Burgess General Manager, NZSBA



Feature Breeds

MERINO, POLL MERINO & HALFBRED SHEEP

Brief History

MERINOS

The Spanish Merino, which became the base breed of modern Merino sheep, was founded on sheep brought into Spain from North Africa by the Beni-Merines, (after which the Merino was named) a Berber people who migrated to Spain in the mid-12th century.

There are now many different strains of Merino throughout the world in countries too numerous to mention. The Merino has contributed genetically to the American Rambouillet; the Comeback (Aus); Corriedale (NZ); NZ Halfbred and the Australian Polwarth are but a few.

Merinos arrived in NZ with Samuel Marsden in 1814. By 1835 he was exporting NZ Merino wool to England.

Eventually Merinos found their niche in the "high country" of the South Island where they prosper to this day. Although a few are found in other areas of NZ, the drier, colder climate and sparser feed suit the production of the 'high end" wool products they are now internationally renowned for.

Below: This modern Merino ram was the Supreme Champion Merino and the All-Breeds Wool Champion at the 2017 Canterbury Show

Photo: I W McCall



POLL MERINOS

The first known antipodean polled Merino was a ram imported into Australia with some Saxon ewes from Germany in 1825. The first specifically Poll Merino stud was founded in Australia in the 1880's. Polled Merinos allow for easier and safer handling of the sheep as neither rams nor ewes have horns. Wethers from polled stock do not grow horns after castration. This is important as Merino breeders often run wether flocks for their wool as they are not subject to the tenderness wool often gets when ewes carry and rear a lamb.

NZ's oldest registered flock of Poll Merinos is that of W H Gibson, "Malvern Downs". It was registered with NZSBA in 1950 and remains in the flock book to this day.



Poll Merino ram from Blairich Station Photo: R Small

HALFBRED

This breed was developed in the 19th century from the Merino crossed with a longwool breed eg English Leicester, Romney or Lincoln. The Halfbred is more fertile and has more meat than the straight Merino. It is found mainly in the foothills of the Southern Alps.



Halfbred sheep

Photo: I Stevenson

Description

Bodyweight

Ewes: 40-55 kg **Rams:** 53-73 kg

Meat

Fine grained, very tender, with minimum fat.

Breeding/Lambing

75-110 percent

Numbers

Stud Merino12,000 approximatelyStud Poll Merino6,050 approximatelyAbout 3.2 million commercially.

Wool

Fibre diameter: Ultrafine: 12.5 - 17.5 microns Superfine: 17.6 - 18.5 microns Fine: 18.5 - 19.5 microns Fine & medium: 19.6-20.5 microns Medium: 20.6 - 22.5 microns Strong: 22.6 - 24 microns

Staple length: 65 - 100mm

Fleece weight: Range 3.5 -5kg Average 3.5 - 5kg

Uses: Luxury clothing, high-performance sportswear and next-to-skin apparel.

A BIT OF HISTORY # 1

From the Pastoral Review [Australian], January 1916

NZ MERINO STUD BREEDERS' SOCIETY

The Society exists to ensure a united stud industry through collaborative work within the Regional Stud Breeders' Associations. The Society and Regional Stud Breeders' Associations undertake:

- Merino sheep selection workshops
- Merino stud tours
- Field days for new Merino growers
- Merino management field days
- Industry representation on animal health and welfare
- Promotion of sheep sales
- Dissemination of industry news and market information with newsletters
- Research and promotion of Merino meat
- Elimination of contamination in wool
- Improving wool packaging standards
- Introducing quality management systems to meet processor requirements
- Organising competitions to promote and reward higher standards in Merino Sheep breeding management and presentation

A BIT OF HISTORY #2

Photo from the NZ Farmer, "A Century in Retrospect", 1982



1912: C. H. Ensor's champion Merino ram.



STUD PROFILE BLAIRICH MERINO STUD Flock #2 Established 1990 Owned by R & T Small Awatere Valley, Marlborough

Ron Small (03)5757257 <u>blairichmerinos@xtra.co.nx</u> Tom Small (03)5757252 <u>tw.small@yahoo.co.nz</u>

STUD STATISTICS

650 Ewes6kg Adult fleece weight at 18micron4.2kg Hogget fleece weight 16.5micron127% lambing (5year Average)

ABOUT THE STUD

Founded in 1990 on pure Moutere genetics, the original breeding objective was to grow superfine wool for the Italian suiting market, on an easy-care fertile sheep. As markets have changed, we have made the switch to fine wool Poll Merinos with the exclusive use of genetically tested double copy poll rams for the 2021 and 2022 joining.

We aim to breed sheep that can capitalise on both wool and meat income streams. They must have good early growth, improved maternal/carcass traits and cut good weights of low micron, white, waterproof wool.

We use ASBVs (Australian sheep breeding values) to help us achieve this with a particular emphasis on Post weaning weight, Muscle, Fat, Adult fleece weight and Micron and footrot resistance.

All stud sheep must meet rigorous criteria for structure and wool quality before ASBVs are considered. There is zero tolerance for fleece rot and bad feet.



A fleece sample from Blairich

All stud sheep are run at high stocking rates and challenged for worms and footrot to ensure only those that perform enter the stud or are sold to commercial breeders.



IMEWZEALAND MERINO

The New Zealand Merino Company

- 'For the love of wool'

The New Zealand Merino Company (NZM) has a simple mandate: enhance our industry partners' brands and create loyal advocates for wool. For our grower suppliers, we drive value by creating consumer demand for strong and fine wool brands at retail, ultimately maximising the market opportunities for our grower community.

Since 2007, NZM's ethical wool certification platform, ZQ, has differentiated wool in the global marketplace. Despite the world still dealing with the pandemic, demand for ethical wool is stronger than ever.

"ZQ fibre is even more in demand than before as consumers seek to source natural products of quality, integrity and ethics, driven in many ways by their experiences during Covid lockdown." Mike Hargadon - GM Supply, Innovation and Logistics.

To support the ZQ program, and to increase supply opportunity, NZM has invested alongside growers and the government in a programme aimed at increasing the productivity and profitability of fine wool.

One workstream identified the footrot disease as the biggest limitation to the fine wool industry going forward, and NZM stepped out to design a way to solve this.

NZM initiated the fine-wool central progeny test (CPT) in 2013. The CPT provided an instrumental dataset for the development of a breeding value (BV) for footrot, which tells us an animal's genetic susceptibility, providing a tool for the industry to breed towards farming more resilient fine wool sheep.

Technology adoption by fine wool stud breeders has fasttracked genetic gain in the industry. Alongside being the vehicle to address footrot genetic research, the CPT supported breeders to generate linkage for breeding values, and benchmark fine-wool sheep genetics against other New Zealand and Australian studs.

In 2020 the footrot breeding value was commercially released, and there are now 20 fine wool studs generating

breeding values for footrot. Beyond breeding for footrot resistance, over the ten years the fine wool stud industry has moved from 9%, to over 90% of rams sold to the industry having estimated breeding values attached. These are able to be used alongside visual selection for faster genetic gain.

The CPT's ninth and final artificial insemination program took place in 2021, with the industry now generating sufficient data and linkage outside of the CPT to progress with the footrot breeding value independently. Successful establishment of the footrot breeding value would not have been possible without the support of the fine wool industry stud breeders. Credit goes to these breeders for engaging with the programme to make an enormous amount of progress towards producing more fit-for-market sheep. Thanks also to NZM's research collaborators; the team of advisors at neXtgen Agri, AGBU (Animal Genetics and Breeding Unit), and 'Sheep Genetics', the provider of ASBVs for the Australian and New Zealand fine-wool industry.

It's time to look to the future. Ethical wool production, validated by ZQ certification, remains at the core of NZM's supply model. However, the opportunity to capture the positive work that is done on-farm and enable brands to deliver authentic information to consumers is huge. In 2020, NZM launched the ZQ^{RX} platform to meet this ever-growing conscious consumer demand. ZQ^{RX} is a mechanism to recognise regenerative action and rewards the work growers do over and above certification.

ZQ^{RX} is about working alongside nature, and we are using technology partners to support our grower community in removing the complexity of legislative requirements, simplifying data into meaningful narratives for the market, and provide sophisticated digital models to support decision-making on farm. ZQ^{RX} growers demonstrate going beyond sustainability and continually improve outcomes related to livestock, soils, climate, ecology, and community. The ZQ^{RX} journey is never 'done', and many of the positive outcomes will be intergenerational.

Overwhelmingly, brands have been excited to use the ZQ^{RX} platform to achieve their goals around sustainability,

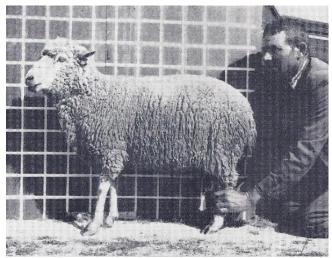
storytelling and as a force for positive change. There has been a particular interest driven by the market on the topics of carbon emissions, and environmental integrity. The bold goal of this progressive partnership between brands and growers is to solve critical global issues such as climate change and the loss of biodiversity through the use of regenerative practices, which translates to improvement over time.

Mediterranean Sheep Breeds #2

From **"Sheep Breeds of the Mediterranean"**, edited by I L Mason. Published by the FAO of the UN by the Commonwealth Agricultural Bureau, 1967.

Updated information from the Portuguese Society of Animal Genetic Resources.

Beira Baixa



Beira Baixa ewe (1967 photo from above-named book)

This is a special milk producing strain [of Merino] numbering about 250,000 of which 98% are found in the district of Castelo Branco [Portugal]. It is derived from the migratory Spanish Merino. Flock size averages 100-300 ewes (1967 figures).

Recorded Numbers (2020)

- 5800 Females enrolled in LG (4249 in pure line) [LG is their stud registry]
- 262 Males

40 Breeders

The breed is in danger of extinction in the medium term. Steps are being taken to assist in its recovery.

Description

A small size Merino – triple purpose; milk, meat and wool.

White wool with whole body coverage. A small head. Females are polled as are some males.

Udder of medium width, well developed, with short but well-set teats.

ZQ^{RX} is now working with over 25 brands, and more than 450 growers representing over 2 million hectares of New Zealand pastoral land. ZQ^{RX} has had huge traction in the market and has appeared alongside brands in publications such as Vogue magazine, Forbes, and The New York Times. Through the platform, ZQ^{RX} empowers consumers to purchase products that have a positive impact on the planet, as carried out by growers. Needless to say, NZM is very excited about the future of the wool industry.

The lambs are weaned at one to two months of age, not exceeding 12 kg of live weight, and sold as "canasta" lambs, 7 kg carcass weight, at Christmas and Easter.

After their lambs are weaned, their milk is used to make a cheese, Castelo Branco.

| | males | females |
|----------------------------|---------|---------|
| Birth Weight (Kg) | 3.13 | 3.09 |
| Weaning weight (kg) | 12 | 12 |
| Adult Weight (Kg) | 56 | 39.19 |
| Milking Period (days) | | 150-180 |
| Milk production (liters) | | 53.99 |
| Average fleece weight (kg) | 2.5-3.2 | 1.5-2.5 |



EID tags can increase livestock productivity and profitability!

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DEVOLD OF NORWAY RELEASE A 5 YEAR \$40MILLION WOOL CONTRACT

Woollen garment company, Devold of Norway, has reaffirmed its commitment to New Zealand Merino growers with a \$40 million dollar contract fixed through to the end of 2026. The Scandinavian company, which recently opened its flagship New Zealand store in Wanaka, operates a vertical model where every step of the process - from the wool to the yarn, to the final finished garment, is entirely managed and controlled by Devold.

Craig Smith, general manager for the buying arm, Devold Wool Direct, says when it comes to ensuring the best quality wool, it starts with investing at a grassroots level. "At Devold we have always valued quality. To produce the very best garments we need the very best wool - so naturally - the sentiment must be reflected in what we pay our growers. We are the first in the industry to place such value on our supply chain, but I hope we won't be the last," Smith said.

The contract goes against the current wool contract system, whereby growers are paid a fluctuating rate depending on the market average. Under the new contract growers will receive a fixed price per kilogram, (higher than the market average) for five years. Devold will also offer a bonus payment of \$2.00 per kg above the new contracted base rate should the wool meet a certain criterion. This differs from the previous model, whereby growers are at the mercy of market fluctuation.

Smith says this fixed contract will also allow for growers to invest in genetics to breed a high-quality Merino fibre, and this ultimately benefits Devold. "As a company, we are always looking for consistency in the quality of wool we buy. Some of the genetics coming into play now in the fine wool sector are of major concern to Devold as they don't place any emphasis on wool structure or fleece weight. Regardless of what some scientists are saying, staple structure, fibre alignment and crimp definition are extremely important in the manufacturing of quality Merino garments that Devold produces. EBV's are a tool as you can't just breed a sheep by numbers, the sheep needs to have good constitution, structure, and quality colour and crimp in the wool," he said.

"What we are trying to do is redefine how clothes are made from the ground up." Smith says.



A BIT OF HISTORY #3

From the Pastoral Review January 1916

By "Rawden" on a trip through New Zealand. He visited two properties owned by Mr. Chas. Goulter, "Hawkesbury" & "Blairich"

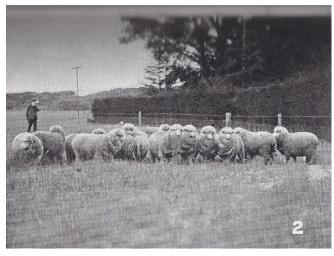
BLAIRICH

Mr Goulter also owns another property in Marlborough called Blairich, in the Awatere Valley. This, which is a "roughcountry" station, is between thirty and forty miles drive from Hawkesbury, the last ten or fifteen being along the Awatere Valley. The road passes a number of fine properties, including Ugbrook (Mr HD Vavasour's), Dumgree

(Renwick's), Ned Downs and others. Blairich homestead, a comfortable old building, is situated close to the Awatere river, and at the foot of the Birch and Blairich Ranges, while further up the valley is Mt Tapiaeniuku, а magnificent snow covered peak, 9,500ft. high and disrespectfully called "old Tapi". Blairich Homestead 1916 >



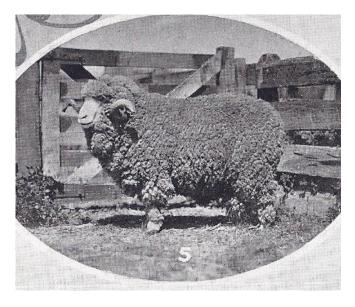
Mr Goulter bought the property in 1900. It comprises about 19,000 acres, and carries 7,800 sheep, mostly Merinos.



Stud Merino ewes bought by Mr Chas. Goulter in Sydney from Messrs. Read Bros, Kooroogama NSW

Few Australians realise what New Zealand's rough country is like.

The Birch and Blairich Ranges, with steep, precipitous faces and rugged saddles, which make up most of Blairich Station, run up to 5,000ft. in height, and it can easily be imagined that here the mustering is no light task. High above the snowline, often enshrouded for days in icy fog and mist, the work has to be done on foot, and with the aid of trained pack horses. Stragglers naturally are comparatively common and sheep may be found struggling along under a four or five years' fleece, weighing perhaps 40lbs. and 15 inches in length. Often the musterers will come across piles of wool, which on investigation will be found to contain a few bones, remains of sheep that having been missed in perhaps two or three musterings have become totally woolblind, and wandering always upwards and never downwards, the idea in their ovine minds possibly being that they are running less risk of falling over the rocks, have collected on the mountain tops, and there succumbed. Wool-blindness, then, or the possibility of it, is such a quality that is likely to lead to considerable losses on such country as this, and there is a fair amount of it in parts of New Zealand, so Mr Goulter's aim is to breed a good open face into his sheep.



Royal Bulldog, a stud Bulldog ram in use at Blarich

Halfbreds are also run on Blairich, and are used for stocking the lower slopes, as for some reason or another it is found that the Merino will not come down from the high country. A small stud of Lincolns is kept for halfbreeding purposes.

Wild pig hunting supplies good and exciting sport, some of the old boars being fierce and ugly enough to satisfy the sporting instincts of the most particular. Over 100 were taken off the ranges last year.

'Years ago, fairy tales all began with "Once upon a time..."; now we know they all begin with "If I am elected..."

Carolyn Warner, 20th/21st century American professor of political science and global studies

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| | 22-25 | 2023 | March | 19-22 | 2023 | |
| February | | 2023 | March | 26-29 | 2023 | |
| | 5-8 12-15 2023 | 2023 | April | 16-19 | 2023 | |
| March | 12-13 2023 | | | | | |

TOUR REVIEW

Molesworth 4WD Trip, March 2022

Thank you for organizing such a wonderful trip for us all. Chris was a super tour leader; Mary's hospitality and food at the station was wonderful and the 4WD experiences and scenery will stay with us all for a very long time.

It's up with the best trips Chris and I have done anywhere in the world.

We all are keen to do D'Urville Island next year."

Liz Darlow, Auckland

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YOU CAN HAVE YOUR CAKE AND EAT IT TOO

At a time that livestock farming is being targeted as being unfairly favoured regarding its high carbon footprint, **Professor Jon Hickford** of **Lincoln University** argues that sheep farmers are on the right trajectory already and that further improvement may also make good sense financially.

My colleague at Lincoln, Dr Jim Gibbs, recently wrote about ruminant livestock production. His headline argument, quoting 18th Century US scientist Benjamin Franklin (I checked this with Jim) was about the certainty of 'death and taxes', especially in his thinking of how we might better manage ruminant methane.

Herein the history lesson, because the true etymology of the phrase suggests it originates from 'The Cobbler of Preston' by Christopher Bullock and reads more correctly 'Tis impossible to be sure of anything but Death and Taxes'. I reckon that is the real deal with respect to enteric methane, because with a surname like that and writing a play about a cobbler, Mr Bullock might have known a thing or two about livestock!

Jim's central argument is that the efforts we are making to reduce rumen GHG production are fraught with problems. It has certainly involved a lot of R&D expenditure and with more to come (based on the 2022 budget allocations). His main argument is that rumen modifiers will not be able to effectively reduce enteric methane production any time soon, and thus we will have to slaughter sheep and cattle to reduce their footprint on the national carbon balance sheet. To quote him directly: "Without an effective enteric methane mitigation tool, the only means the Government - and the various collaborators above (referring to some key figures in that research) have to reduce emissions from livestock is to slaughter them."

I think we all know what will happen then. Our economy will falter because of the loss of export income and other international producers will gleefully snap up the market opportunities with their livestock. These livestock are frequently farmed with a much larger GHG footprint, whilst eating human digestible food (i.e., grain, soy) and with the benefit of a staggering array of subsidies too. Impressing that upon our typically urban politicians in New Zealand, let alone the people in various non-Government anti-farming lobbies, seems to be an impossible task.

This is not to say that breeding approaches will fail, and that is want I want to focus on here.

First, as some of you know, farmers can hire specially designed portable chambers that can be taken on to farms to measure the enteric methane emissions of individual sheep. It is a slow job to do this, but various peer reviewed papers suggest a low to moderate heritability for the trait, with between about 10 and 40% of the variability in progeny being

explained by variation in their parental generation. Those heritability estimates are similar to estimates for other key traits in sheep production, so a breeding approach to reducing enteric methane output can be used. While that all sounds good, and it does work, the direct cost of measuring the ruminant methane production is high, and progress will not be that fast.

In New Zealand, scientists at AgResearch have been able to demonstrate using these gas collection chambers, that after three generations the lowest emitting sheep produce close to 13 per cent less methane than the highest emitters, per kilogram of feed eaten. While methane reduction on-farm will be less when sheep are also being bred for other desirable traits, it is still expected to be substantial. What-is-more the lower emitting sheep have been found to be healthy and productive for both meat and wool. This is good news, and it does not necessarily involve the slaughter of sheep, just the use of better genetics.

But I think we can 'have our cake and eat it too', to misquote a letter from Thomas, Duke of Norfolk to Thomas Cromwell in 1538. Cromwell was a mate of Henry the VIII's and the social uprisings during that King's reign was in a part a consequence of rumours of new taxes on sheep and cattle ownership. Sounds very familiar, doesn't it!?!

What I am getting at, noting that I failed 6th form English and never studied history?

If you cast your mind back to the early 1980s, Sir Robert Muldoon's Supplementary Minimum Price Scheme (1978) guaranteed farmers price stability for their products, and despite declining international market values. Consequently, farmers grew the National flock to a peak 70.3 million sheep in 1982. Most people who are honest will admit that many of these sheep were not very productive at all.

For example, over the 1980s lambing percentages were sitting at about 100%. Now it is too easy to crow, and I regularly see over-exuberant farmers citing scanning percentages in the mid-250 region, but to wean over 170% in New Zealand is an achievement, especially in our more challenging environments. This stated, lambing percentages still sit resolutely around 130% nationally, hence the gap between the best producers, the average, and the 'also rans', is very large.

We can do better, but it takes concerted effort especially in how we manage summer feeding to get ewes back into

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condition after weaning, and then manage pregnant ewes prior to lambing to avoid sleepy sickness (ketosis) and the birthing of undersized lambs. The undersized lethargic lambs are more likely to die, especially if they drop to near 2.5 kg in weight, and they are also slower growing. They are what I regularly see in my travels internationally, but NZ sheep farmers are getting better at tackling this problem.

How does this fit with the GHG argument? I think we can address the problem by simply further improving reproductive performance in our sheep, which does not mean having unsustainably high fertility. I think we could and should reward those farmers that wean with percentages (for ewes mated to lambs weaned), at or above perhaps 150% to start with, whilst maintaining lamb losses under 5%. That extra 20% above the average lambing percentage does not come with a vastly bigger increase in carbon footprint, although I accept that multiple-bearing ewes do consume more feed in late pregnancy and during lactation. If this change was made, then from a carbon perspective you might choose to increase stocking rates to accommodate those extra lambs, but equally your response might be to reduce ewe numbers and earn the same amount from lamb sales as previously, or maybe even more, if that means you could also reduce your labour costs.

At the national level, while the wintered ewe flock has dropped to about 26 million, lamb production (head count) has declined at a slower rate, and what-is-more, slaughter weights and the lean meat yields from carcasses have improved. Most of us are comfortable talking about 18+ kg carcasses these days, and not the 'skinned rats' of the past. This is not to say these production gains have come with no increase in feed intake and thus enteric methane production,



but the carbon efficiency of the system has markedly increased and can still be further improved.

In effect we would incentivise productivity and I suspect that would have a greater effect on the GHG footprint of livestock than trying to tax our way out of the problem. Taxes of any kind, carbon or otherwise, impose economic costs by altering the behaviour of individuals and businesses. Without getting too excited about it (and I also didn't study business in my schooling!), taxes on farming could have adverse effects on productivity by reducing savings, investment, the supply of labour, entrepreneurship, and innovation. They also allow rich international corporates to assuage their carbon guilt by buying up productive farms and planting them in monoculture pine trees. I recently argued the irony of the Government bailing out Air New Zealand (one of the guilt-stricken corporates) yet again, even though this will facilitate easier 'carbon-polluting' air travel. They also of course dropped the tax on petrol and RUCs, so the 'nuclear moment' argument about climate change has worn rather thin.

It isn't just reproductive performance and lamb survival that could be improved on-farm. In livestock farming and from a GHG perspective "growth is king". Slow growing stock, or unproductive stock, have an increased GHG footprint because of the increased lifetime cost of maintenance feeding. This is the feed required to maintain basic bodily functions such as blood flow, immunity, nerve function, heat generation, etc. The faster we can grow livestock and ultimately to slaughter, the smaller the relative cost of maintenance feeding. Given that feed intake is directly related to enteric methane production, then a smaller relative maintenance cost will lead to carbon efficiency. Because of this, a key trait for any livestock producer must be growth rate, and especially to weaning. The eBVs that the likes of SIL and Breedplan provided for this trait, are accordingly critically important for breeding if we are to reduce per-head enteric methane production.

This is also why many New Zealand scientists are very suspicious of the new fad of regenerative agriculture. Anything that reduces growth rates such as potentially the use of low-quality multispecies pastures, will come with a higher carbon footprint. In one of the first of the Government-funded regenerative agriculture studies I have seen, the RA system was only producing cattle of a useful slaughter weight at three years of age, versus some of the terminal sire breeders I talk to, who can do that at 14-15 months. That inefficiency will increase the carbon footprint of beef production massively, and once again because of the large proportional cost of maintenance feeding.

Finally, if you think you are winning, then contemplate this. If your sheep or cattle don't eat the plants and grasses in your paddocks because you have killed your stock off, then what will? Does the carbon sequestered into the plants get permanently locked up, or does it instead get rapidly released back into the atmosphere as the plant/grass dies back over winter? Pasture that isn't eaten by sheep and cattle still produces GHGs!

"The art of leadership is saying no, not yes. It is very easy to say yes"

> Tony Blair 1953in Mail on Sunday 2 October 1994



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WIDDLE WOOLIES, HANDMADE WOOL NAPPIES

Kia Ora,



I'm Tara, the creator and maker behind Widdle Woollies, handmade wool nappies for little bums. As a stay-at-home mum of 4 I've always wanted to use modern cloth nappies with my kids and after two failed goes I finally got it right with my 3rd child. I attended a cloth nappy

workshop when my baby was three months old which had opened my eyes to so many different styles of reusable nappies and that's when I discovered wool. This amazing natural fibre had so many wonderful benefits that I couldn't understand why this wasn't a more popular choice and used by every parent out there already.

You couldn't buy any New Zealand made wool nappy covers at that time, so it became my mission to teach myself to sew, I created my own pattern and started making and selling online to the cloth nappy community where overtime has become more and more known. My goal was to educate parents on this magic fibre and show how easy they were to use as it had been used for so many generations before us but had somehow become lost, I wanted to bring it back and make wool cool again.

Palmerston North is where I create unique, reusable woollen nappy covers which are used as a waterresistant cover over the top of any absorbent fabric such as cotton, bamboo or hemp. Each cover is lovingly made by repurposing 100% wool clothing and blankets which I find at op shops or donations provided from the local community, it's always a win to find a "made in NZ" jersey. With the amount of clothing that gets thrown out every day, I feel we shouldn't waste it but give it a new lease of life and create something beautiful and useful. Wool is such a quality fibre that I just can't let that go to landfill, each piece of clothing tells a story.

The beauty of using wool as a nappy cover is that it's breathable and can hold a third of its weight in excess



moisture drawn away from baby to help keep skin dry and rashes at bay. Wool keeps them warm in winter, cool in summer. They have antibacterial and antimicrobial properties as well as being odour resistant. One of my favourite things of all is that you only need to wash and lanolise them every 4-6weeks unless soiled, how great is that!

Widdle Woollies wool covers are cosy, soft and super comfy as you slide them on like shorts. I also hand make wool wraps, wool pants, wool wet bags and wool breast pads all made of this brilliant sustainable and renewable fibre.

All of these quality products and more can be found at my online shop <u>widdlewoollies.nz</u>

As a full time, wool diapering mum my best advice is to take cloth nappies one day at a time, as that's one less disposable to landfill. Wool is truly amazing... healthy for baby, easier on the planet and you can compost the covers at the end of their life. Go wool!





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'if you're already doing parentage then you're already doing the hard yards – sampling the animals – so you may as well get as much out of that sample as possible'.





WOOL – AND HOW IT GROWS

A revised series of article on aspects of wool biology. (First published in Black & Coloured Sheepbreeders' magazine Issue #17, November 1980) By Roland Sumner, AgResearch, Whatawhata Research Centre. Reprinted with permission of BCSBA & Roland Sumner

Part four - Wool growth curves?

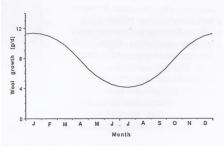
Wool growth can be likened to the production from a factory consisting of a large number of machines making a similar product, in this case wool follicles growing wool fibres. We have previously looked at how the machines are arranged on the factory floor, how the machines work and the type of goods produced by the machines. Sophisticated machinery producing useful goods is all very well but output is the key to productivity. Individual follicles, like machinery, cannot continue to produce fibre indefinitely. Periodically, they need to be shut down for servicing and maintenance. During times of reduced wool growth some wool follicles may stop producing completely and enter a resting phase for a period before recommencing to grow a new fibre.

Sheep are interesting animals in that they evolved in areas of the world where there was a marked seasonal variation in feed supply with adequate feed available in the summer and limited feed available in the winter. Thus the animal's body processes became regulated by the seasons. The sheep developed a restricted mating season so that when the lambs were born there was adequate feed available to enable them to grow sufficiently to survive their first winter. They also developed a wool growth pattern to suit the feed supply.

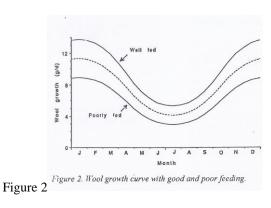
The hormones which control wool growth are related to those which control reproduction and are released into the blood stream by a small gland at the base of the brain called the pituitary. These hormones have the effect of controlling wool follicles to not exceed certain limits. The mechanisms controlling both wool growth and reproduction react to the ratio of length of darkness to length of daylight during a 24 hour period. The light/dark ratio is detected by the eyes and influences the pituitary gland. The effect is that many sheep breeds have a pronounced seasonal wool growth cycle with wool growing faster in the summer than in the winter. The seasonal cycle of wool growth tends to vary with latitude so that many of the breeds of sheep developed in countries at high latitudes such as Northern Europe, Iceland and the islands north of Scotland actually stop growing wool during the winter regardless of how well the sheep are fed. Follicles which stop growing and enter a resting phase continue to hold onto their fibres providing insulation for the sheep over the winter. Later in the spring when a new fibre begins to grow in the follicle the old fibre is pushed out and shed.

Generally, the more marked the inherent seasonal wool growth the more fibres that are shed the following spring.

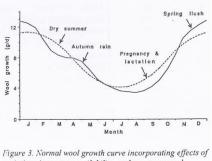
Thus, Scandinavian, Icelandic and Shetland Island sheep may shed their complete fleece in the spring. The shedding cycle tends to start at the lower posterior end of the sheep and later the lower neck before spreading up the body. The last area to shed is above the shoulder blades. At the other end of the scale the Merino only shows a slight seasonal wool growth cycle with few follicles entering a resting phase. This may occur at any time during the year.











variations in pasture availability, and pregnancy and lactation.

The extent of the cycle which occurs for Romney ewes, under constant feeding in the Waikato is shown in figure 1. The cycle for the Coopworth and Perendale breeds is very similar. The growth rate for the Perendale is slightly less than the other two breeds resulting in a lighter fleece.

Although the light/dark ratio is a major factor regulating wool growth during the year, feeding also plays a big part.

Figure 2 illustrates the likely wool growth curves for the Romney ewes that are either 'well' fed or 'poorly' fed throughout the year. Notice how wool growth is more responsive to increased feeding during the summer than during the winter.

In reality however, it is neither possible nor prudent to feed mature breeding ewes at a constant level of feeding all year. During the summer many areas of New Zealand experience a dry spell while in late winter and early spring, breeding ewes require extra feed to meet requirements of lambing and lactation. Feed requirements for breeding ewes are low in February, though good feeding increases ovulation rates and hence lambing percentages. The result is that the normal wool growth curve experienced by most of our ewes is similar to the curve illustrated in Figure 3.

In later articles I will discuss the implications of those peaks and troughs in productivity by wool follicles on wool characteristics which are of importance to handcrafts and processing.





Raglan Ewes at Gary Charteris' near Haast Pass

Raglan Sheep

In the early 1970s there was some interest among research groups in New Zealand that animal species which had become feral around the archipelago could offer some genetic advantages to farming. This was based on the knowledge that these animals could live in New Zealand environments without the aid of humans, indeed in many cases despite attempts by humans to control their populations.

The late Dr Murray Bigham acquired some sheep that were captured from the Paritata Peninsula (37°46'S, 174°56'E) in Raglan (Whaingaroa) Harbour. The foundation flock were procured in 1976, and their descendants, were maintained on several Ministry of Agriculture and Fisheries farms around the Waikato region. The flock was grazed and managed as with other sheep, particularly other feral flocks except during mating when they were separated into single sire mating groups to retain genetic purity. Mating strategies were adopted to minimise inbreeding as far as possible.

In 1990 the flock moved to the Whatawhata Research Centre (37°48′S, 175°5′E). They were later transferred to the Winchmore Research Station (43°47′S, 171°48′E) in Canterbury in 2000. The major management change with the transition to the South Island was that the ewes were shorn in August at Whatawhata and December at Winchmore in harmony with the weather patterns. Collection of production data ceased in 2004 and the three flocks were dispersed.

Opinions towards the Raglan and other strains varied from distaste for them to curiousness among the many farm managers and farm staff that handled them. Science staff were fascinated with them and remain so today.

Dr Roland Sumner and others discovered that the fleece weight of feral sheep was remarkably lower than domestic strains, it was also one of very few differences with farmed sheep and this may be the secret to their survival. Although fibre samples had been collected from all animals each year, there had never been sufficient funding to measure fibre diameter and curvature until the Rare Breeds Conservation Society invested in the measurement of some samples and enabled a more complete understanding of the flock.

Almost all other populations of feral sheep were dominated by sheep with black pigmentation with the exception of the Raglan and Campbell Island strains. Almost all populations were dominated by horned males and many females also had small horns. Horns more than likely give the animal carrying the horns an advantage over polled competitors for food and mates, though research in the UK on other feral sheep suggests polled rams achieve mating success more frequently in periods when food is scarce. The Raglan sheep had neither horns nor pigmented animals in the feral flock. This may be due to what geneticists call the "founder effect" where none of the animals that established the feral flock carried genes for pigmentation or horns. It is not clear why pigmentation would be an advantage, but it dominates in most other flocks and this remains an interesting scientific question.

Despite many years of surviving and breeding in a New Zealand environment it has only been researchers and the Rare Breeds Conservation Society that have ever expressed any interest in these animals. Indeed, recent television and radio items have covered the introduction of yet another new overseas breed that has little to no fleece but comes from a foreign environment. It seems we always want to import something shiny and new rather than use what nature selected for us.

Dr. David Scobie AgResearch May 2022.

My time with Raglan sheep

by Marion Mangnall, Greendale, May 2022.

All Photos by Gary Charteris

After the research programme with the Raglans finished at Winchmore in 2004 and the flocks were dispersed, Jean Donaldson was one person who took on a few to breed. The Rare Breeds Conservation Society of New Zealand did not have records/contacts of any others who were breeding them without outcrossing.

When Jean decided to sell a small flock, I thought it a must that the Rare Breeds Society get involved with making sure this breed of little sheep was maintained. I bought six ewes and a ram, and very soon became the only person breeding them. The holdings in Gene Bank at Xcell Breeding Services were 7 embryos plus 41 semen straws from one ram and 47 semen straws from another ram. Not really enough to resurrect the breed if something was to happen with the ones I had.

With a grant from Rare Breeds and the release of some semen straws I had five ewes AI'd, and with the resulting progeny set about finding some others to take on the Raglans. It took a little while and some advertising in the Rare Breeds *NewZ*, but eventually Gary Charteris in Makarora (between Haast and Wanaka), Murray Walter in North Canterbury and William Searle also in Canterbury each took a small starting flock. This was a huge relief for me as I felt they now had a future as well as a past. All three of these breeders are still enjoying their Raglans.



Raglan ram #1

Just a month ago the Canterbury Group of the Rare Breeds Society funded four ewes and a ram to have embryos and semen collected and deposited in the Gene Bank at Xcell Breeding Services. This will help ensure there are means to resurrect the breed if anything happens to the animals we presently have or if there is a need to use some to give an increase of genetics to those breeding. Ten embryos and another lot of semen straws have been deposited. The ram and ewes were lent for this programme by Murray Walter – the ram having been bred by Gary Charteris and brought to Canterbury last year for Murray's breeding programme.

I no longer have Raglans as my involvement was always a short-term measure to enable some new breeders to be found but I will remain interested in their welfare. They're a hardy little breed of sheep and I had no handling or breeding problems with them. They adapted well to the wet climate in Makarora after the first year or so and are thriving.

If you could be interested in running a small flock of these little sheep – do it – because they're worth it.



Raglan ewes



Raglan ram # 2

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<u>A Bit More History</u> from National Library, *Papers Past* Lyttelton Times 26 Nov. 1879

To the Editor

Sir, - It may interest some of your readers to know the weights clipped from a few American merino sheep, which I imported about 10 months ago. The average of ten rams was a little over 21lbs, the heaviest (his fifth fleece) being 25½lbs. Of 20 ewes (wet) the average was 12¾lbs, the heaviest ewe fleece being 16½lbs. It is but fair to state that the fleeces of the sheep were fully 16 months of age, but against that there was the drawback of their voyage, consisting of journey across America by rail, steamer from San Francisco, transhipment from Auckland to Port chalmers, and 42 days quarantine and dipping, all of which must have told considerably sagainst the growth of wool. I have no doubt that at the next shearing 12 months hence, the fleeces of same sheep will equal in weight those I recorded.

I am, &., W MOODY Craigmore, Timaru, Nov

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The **Closing Date** for next issue of the newsletter will be <u>August 20th for the</u> <u>September 2022</u> newsletter.

Please get items in well before the deadline!!!

"FEATURE BREED" will be Shropshires

If you would like to be part of this section or the newsletter, **photos and stud histories of All Breeds are accepted at any time for next** issue.

EMAIL OR POST TO THE EDITOR – see front page for address details.

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