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Dear Woolgrower,

Boy has there, quite literally, been a lot of water under the bridge since last year's newsletter! Most of us have had our third green summer in a row and it's great to see how well wools have held up and flies have been held at bay in so many flocks. Prices might not be what we've enjoyed over the last couple of years but we at Connewarran feel there's still good reason to feel optimistic about the trajectory of our genetics, business, and industry. In this newsletter we discuss some of the things we've learnt, and actions we've taken, over the last 12 months in our continued pursuit of a highly productive, profitable, and environmentally adapted merino.

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## *Bendigo. The sensible centre, or lack of it. Some big picture thoughts.*

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### KEY POINTS:

- Our overall impression is that many merino sheep are becoming less "balanced".
- We continue to strive for a genuine dual-purpose animal, but won't lose sight of the merino's competitive advantage, the production of large quantities of high value apparel wool.

Bendigo's Australian Sheep and Wool Show is an annual pilgrimage for us. It's a great showcase of our industry's genetics and technology that helps us to think critically about our own operation. Hopefully our attendance leads to decisions that improve our business, and sheep that better serve our clients.



The single animal that most intrigued us this year was a ram, born a triplet out of a ewe lamb, with a CV of 12.0. There's no doubt that's an impressive feat! We chatted to the owner who spent the best part of an hour telling us that the only thing that mattered in sheep breeding was post weaning weight.

With some notable exceptions this seemed to be the theme of the show. So many breeders seem to be pushing their sheep to extremes on single, or very tightly collected, traits and claiming this is all that matters. Sheep were the biggest, or the woolliest, or the plainest, or the fastest growing, or the most worm resistant. We only came across one stud that talked, extremely sensibly in our opinion, about trying to breed a merino that was a relatively balanced package of productive traits and the trade-offs between these traits.



We figure that if that's what we're experiencing maybe others are too, and that its worth briefly recapping the philosophy behind the sheep we strive to breed.

We believe in merinos. They produce a magical fibre and taste great! The merino is a dual-purpose animal, it produces meat and wool, but the competitive advantage of a merino lies in its capacity to produce large quantities of very high quality apparel fibre. That's the thing merinos do better than any other animal, or machine, in the world. So, as we develop our bloodline, we seek to **augment** the wool producing capacity of our sheep with stronger reproductive and carcase attributes. We do not want to **trade** that wool producing capacity for meat production capacity. That's probably not such a unique idea, but it does seem to us that in the rush to improve many breeders are doing more trading than augmenting.

We want an animal that can:

1. Cope with cold and wet environments.
2. Have a relatively plain body but can produce commercial quantities of high value fleece.
3. Reproduce efficiently.
4. Grow with sufficient pace, to sufficient size, to give its owner marketing options as conditions in various markets change over time.

In the balance of this newsletter, we'll discuss some of the things that have occupied us in the last 12 months to that end.

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## Productivity traits

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### REPRODUCTIVE EFFICIENCY. LAMB SURVIVAL: COLD TOLERANCE GENE MARKERS LOOK LIKE THEY'RE "A THING"

#### KEY POINTS:

- The evidence of the power of the cold tolerance gene marker continues to mount
- We're continuing to prioritise the selection of higher fat sheep, will increase our attention to cold tolerance gene markers, and are also measuring directly and will select on foetal survival

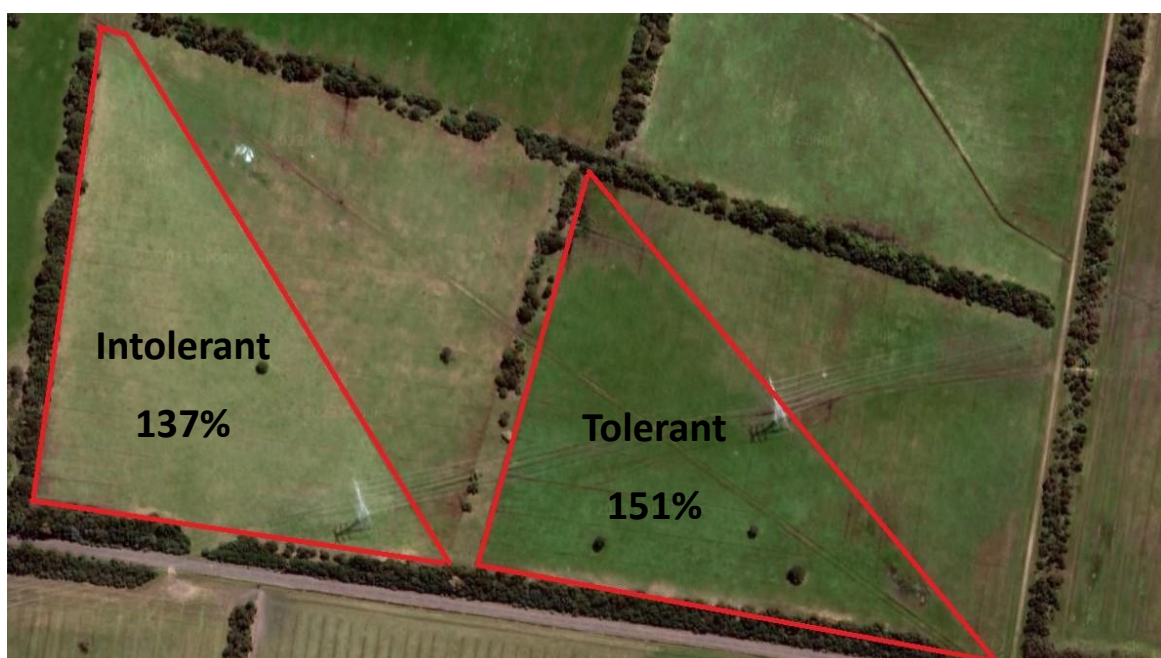
We continue to focus on lamb survival as a driver of both wool productivity, through increased selection and culling pressure, and meat productivity, through increased surplus sheep sales.

Our priorities remain to measure the traits we have associated with survival: fat, cold tolerance gene markers, and skin type, and also measure survival directly. We are using these measurements in selection decisions and, combined with careful management, are seeing increases in our foetal survival and marking rates.

In our spring 2022 commercial lambing we continued our "proof of concept" testing of the cold tolerance gene marker technology provided by Lincoln University's genetics lab in New Zealand.

A random draft of green tag flock ewes were split in two and each group was joined to a syndicate of two rams. The first syndicate was a "cold tolerant" syndicate, including two rams that held AA status. The second draft was the "intolerant" draft, featuring rams with BB and BC status.

Post scanning twin bearing ewes from the two syndicates were identified and lambed down in very similar paddocks in terms of size, shape, number of ewes, feed on offer, shelter and ewe density. Paddock A had 60 ewes in lamb to twins sired by the "intolerant" syndicate. Paddock B had 59 ewes in lamb to twins sired by the "tolerant" family. Lambs and ewes were counted out of the paddocks prior to boxing for marking with the results below:



The results are enough for us to consider the cold tolerance gene markers “a thing”. When we combine this on property trial with the analysis of stud lambing results divided by gene marker status, and the research promoted by Lincoln, we think there’s enough evidence to suggest that cold tolerance gene markers do have an influence on lamb survival. We will now increase the weighting we give these gene markers in our selection decisions.

Despite this exciting development, we don’t think cold tolerance gene markers are the silver bullet. As discussed in last year’s newsletter, if cold tolerance genes are the engine that generates warmth in a cold snap, fat is the fuel. We need both. We also note that these two factors alone cannot explain the variation in survival between sires in our own lambings. We’re reasonably confident that skin type is another contributing factor, and that there’s probably many more. We’re measuring foetal survival directly by sire to better understand these factors, but also so we can directly select on survival if we choose to. Our top performing sire in the 2023 drop marked 147% and had a foetal survival rate of 96%. By comparison, an industry leading external sire selected largely for carcass traits marked 111% and had a foetal survival rate of 84%.

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## Welfare traits

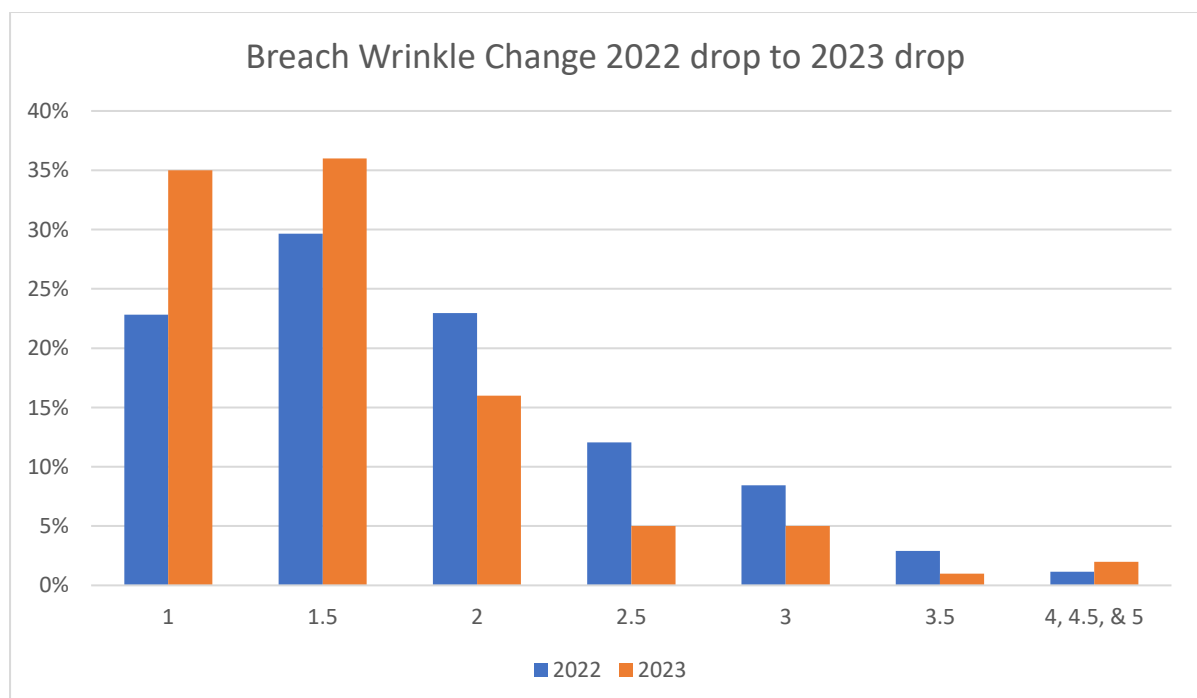
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### MULESING

#### KEY POINTS:

- Our sheep continue to tend plainer to the point that we can begin to reduce selection pressure on this criterion.
- Approximately half of the 2023 sale offering to be NM, with top up rams available if required.

Below are the breach wrinkle profiles of our 2022 drop (2023 sale offering), in blue, and 2023 drop (2024 sale offering), in orange, stud lambs.



Our animals continue to tend plainer. In 2016, when we first started to pay serious attention to breeding a non-mules sheep, we were putting plainer rams over more traditional ewes. In 2023, we are putting plainer rams over plainer ewes. The result is a quite significant plaining of our animals and we believe that we have now reached the point where we can decrease the selection pressure we have been placing on breach wrinkle. This doesn't mean that we're going to go back to breeding more wrinkly sheep. Rather that, given the majority of our animals are relatively plain, we can afford to slow the progress in this area and transfer that pressure to other traits.

It's not terribly scientific, but the little montage below are an example of 2017 drop (left), 2019 drop (centre) and 2023 drop (right), lambs at a couple of weeks of age.



We expect approximately 50% of the 2023 sale offering to be non-mulesed and the majority of the 2024 sale offering to be non-mulesed. For the 2023 offering, we also will have a store of grade rams available for clients who may wish to top up after the sale. There are plenty of high quality rams to go around.

#### **SOMETIMES YOU GOT TO TALK SHIT (OR DAG AS THE CASE MAY BE)**

##### **KEY POINTS:**

- We intend to start applying selection pressure freed up from breach wrinkle to reducing dag

We intend to apply the selection pressure freed up by a decreased emphasis on plaining our sheep to focus on reducing dag. We've pondered dag a lot over the years. We don't know how much is behaviourally influenced, by things such as forage selection. However, sire evaluation trials have demonstrated that variation can exist between male lines and we've seen producers make significant gains by selecting solely on the female side. With increasing challenges associated with attracting shearers and crutchers, the time has come to work directly and in a structured manner on this trait. Initially we intend to work on the sire side by selecting through sire phenotype, aggregation of dag scores on sire lines, and on the ewe side eliminating highly daggy ewes directly. Over time we are sure we will refine our approach. We don't expect to eliminate dag overnight. However, we do believe that in time we can make significant inroads and that this investment will be of significant value as we move ever closer towards what we anticipate will be a non-mules era for our industry.

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## *Sire evaluation trials*

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Our commitment to the external and impartial benchmarking of our genetics continues through our involvement with Australian Merino Sire Evaluation Association (AMSEA) Sire Evaluation Trials. In the 2022 drop at Balmoral we have an entrant with a rather nice story.

In our 2018 sale Fleur Hillman purchased lot 48 of the 60 offered, Con 17223, for \$4,600. Fleur is a passionate and skilled sheep breeder who we are proud to say has had a long association with Connewarran. Sometimes, when we visit Fleur at her property, we are fortunate to be shown some of her outstanding wool clip, sheep she is breeding, or the ram battery she has assembled over the years. On one of these visits we were very pleased with the way 17223 had come on. In time we elected to purchase semen from Fleur to use in our own breeding program and ultimately, with Fleur's consent, we elected to enter 17223 in a sire evaluation trial.

The thing that excites us about this particular entry is that 17223, notwithstanding his obvious merit, was not a sheep that we had initially retained for our own use. He was a sheep that was freely available for purchase at our sale and was secured for less than \$5,000. Whilst this is certainly a significant sum, it is not a particularly high price in the context of merino ram sales in Australia. To see this sheep then evaluated against the very best sires entered by a range of leading studs in Australia, and to see him hold his own, we find very exciting and an endorsement of the value that is available within the Connewarran offering.

It is early days in the evaluation of the 2022 drop at Balmoral, but 17223 is doing a commendable job. He is one of only four sires (from a total of 21) to have added fleece weight whilst simultaneously reducing micron, one of the key drivers of profitability in any wool enterprise. Visually, he is also demonstrating very solid conformation and the high rainfall wool traits that we'd like to think are associated with Connewarran blood sheep and critical for a merino enterprise in the high rainfall zone.

Congratulations Fleur on once again picking a great sheep. Thankyou for your support over the years. We look forward to seeing how "Hillman", as he is now known at Connewarran, performs at Balmoral over the next 12 months or so.



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## *Connewarran Borders*

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In recent years we have been working to apply our sheep breeding skills to an expanded range of breed profiles. This has led to the formation of the Connewarran Border Leicester offering. We have assembled a small number of foundation stud ewes, sourced from the Jackson and Ellingerrin Border Leicester Studs, and will have our first drop of grade rams available for sale by private selection in the 2023 selling season.

The plan is to breed a Border Leicester with the traits they are so well known for, high fertility and growth, and to use some of the skills we have developed as merino breeders to build on that basic offering and create a point of difference over time. We aim to add value in the area of wool, creating a whiter, finer, better aligned fleece which will create a first cross ewe with a more valuable fleece and greater flystrike resistance. We also aim to leverage the work we've been doing on lamb survival to increase survival in the Border Leicesters and hence create even greater weaning rates. Ultimately this should help breeders of first cross ewes to get more for their wool, spend less time and money managing flies, increase their weaning rates, and hence increase the labour efficiency and profitability of their first cross operation.

Over the next few years we intend to fairly quickly build the number of ewes and hence rams available for sale. Initially we intend to base our genetics on Inverbrackie and Jacksons bloodlines, increasing the use of our own sires as they become available and we get the diversity in our ewe base required to do so. Figures will be available.



Wishing you all the best as the season progresses.

Hamish, Eli, Richard and Jenny Weatherly  
Connewarran Merino Stud