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Dear Woolgrower,

Well, looking on the bright side, it's been great weather for lambing. It's hard to contextualise a season and compare it to others when you're in the thick of it, but it's clear that for many this is one of the worst we've had. Our thoughts are with all those in our industry who are struggling through an undoubtedly tough time. At Connewarran we're tracking at about half our average annual rainfall for the calendar year to date. Despite the short-term challenges this presents from a management perspective, in the big picture of genetics nothing has really changed. We continue to strive to breed ever more resilient, plain, fine wool merinos highly adapted, ironically enough, to a high rainfall environment. In this newsletter we discuss some of the actions, achievements and reflections we have taken to that end over the last 12 months, including:

- Our support of industry research and some of our on-property findings relating to resistance to fly strike and footrot
- Some great benchmarking outcomes through AMSEA sire evaluation trials
- Our reasons for wanting to "be close to our data"
- Actions and progress on carcase traits and cold tolerance



Resistance to Fly Strike

Key points

- Our animals have become even more resistant to fly strike over time
- Supporting industry research promotes rapid learning and genetic gain

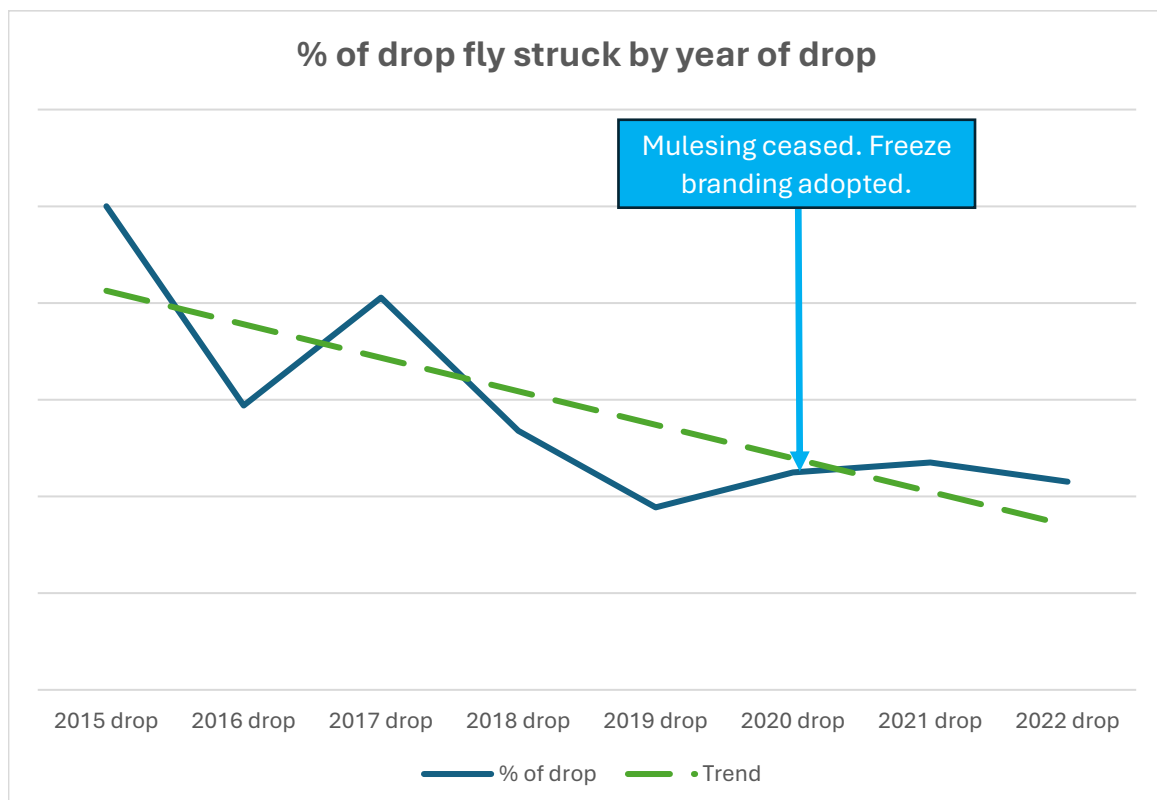
It's easy to forget in the current dry spell that earlier in the season many growers experienced some of the worst fly strike conditions in a long time. Such periods are not fun but, from a breeder's perspective, it is good for our animals to be challenged. It helped us gather valuable data and was also ideal for kicking off participation in two significant industry studies:

1. The AWI flystrike genomics reference flock project
(more information at <https://www.wool.com/news-events/news/genomics/>)
2. The sheep blowfly trapping project
(more information at <https://www.wool.com/news-events/news/fly-traps/>)

Participating in projects such as these serve several purposes:

1. It keeps us in contact with leading industry research so we can be quick to integrate new learnings and technologies into our own breeding and management, and
2. It helps us to analyse, measure and benchmark our genetics in an objective and detailed way

It's too early for results at the project level, but at the property and flock level there is clear evidence of our sheep becoming more resistant to fly strike over time.



The graph on the previous page shows fly struck ewes in the 2023/24 season as a percentage of their age cohort. Our stud ewes were shorn in early September 2023 and run through the summer without chemical application or crutching. They were shorn again in early March. All strikes during this period were recorded and struck animals were removed from the stud permanently. A tissue sample was also taken for DNA genotyping for the genotype project.

The on-property results show a very clear trend of increasing resistance of our animals to flystrike despite mulesing being replaced by freeze branding during the period. The strike incidence in our younger animals is significantly lower than in the older, despite the older animals having had significantly more selection pressure placed upon them over time. The good news is that we expect this trend to continue and perhaps even accelerate as we:

- 1) Strengthen our focus on dag reduction
- 2) Continue to breed relatively plain bodied animals
- 3) Continue to remove any fly struck animals from the stud breeding program



Focus on Feet

This year Connewarran will be submitting animals to the “Cull Ram Challenge”. This is a project that aims to identify merino genotypes with a natural resistance to footrot. The wet and sandy nature of our property means that any weaknesses in feet are quickly exposed and as a result we have had fairly intense selection pressure on this trait over time. We look forward to participating in this project and seeing the results.

(More information at <https://www.wool.com/news-events/news/genetics-of-foot-health/>)

Benchmarking Connewarran Hillman Outperforms at Balmoral

Key Points

- Connewarran Hillman ranked equal 2nd of 21 sires on the FP+ index and equal 3rd on the MP+ index
- We love sire evaluation trials because they are “real world” benchmarks. “The proof is in the paddock”
- Connewarran now has entered 10 sires in 15 trials over a period of 14 years
 - 8 of 10 sires have ranked in the top 3 of an index
 - 4 sires have ranked 1st in an index

We were very gratified by the performance of Connewarran 17223, AKA, “Hillman” in the 2022 drop Balmoral Sire Evaluation Trial. Hillman was lot 45 of 60 rams offered in our 2018 on-property ram sale. He sold for a sale high price of \$4,600 to long term client Fleur Hillman. Later, we purchased semen back from Fleur and entered Hillman into the trial. What we love about this entry is that this was a commercial animal freely available to any participant at our sale at a significant, but by no means extreme, price. To have such a ram tested against the industry’s best was a big challenge and we’re delighted by the results.

Highlights included:

- That Hillman ranked equal second of 21 sires on the FP+ index
- Equal third on the MP+ index
- Was one of only two rams in the trial to increase fleece weight and reduce micron
- Had below average dag
- Was a trait leader on four of 6 measured wool quality characteristics including the lowest fleece rot and whitest wool
- Had positive tops and negative culls



More information at

<https://merinosuperiorsires.com.au/>

AMSEA Balmoral Sire Evaluation Trial 2022 drop results

Sire Code	Breeder's flock, Sire number	Number of Progeny	AMSEA Index Values			
			Dual Purpose Plus	Merino Production Plus	Wool Production Plus	Fibre Production Plus
1	Anderson Poll, 200519	44	121	111	104	112
2	Austral Park, 180015	38	83	82	86	80
3	Benefield Poll, 200055	37	123	128	128	110
4	Boxleigh Park, 181057	43	90	77	88	74
5	Centre Plus Poll, 707350 (Link Sire)	31	122	119	120	111
6	Connewarran, 017223	27	98	120	108	125
7	Deep Dene Poll, 180020	49	113	120	119	125
8	Forest Springs Poll, 200102	31	118	105	102	105
9	Glen Holme, 206139 (Dohne)	42	89	53	67	51
10	Hannaton Poll, 200155	46	45	57	64	51
11	Hazeldean, 002980	33	110	146	137	143
12	Karalta Poll, 180953	42	89	80	74	96
13	Kurra-Wirra, 200572	25	105	89	88	94
14	Merinotech WA Poll, 177269	32	116	109	103	114
15	Miramoonna, 140012 (Link Sire)	35	126	117	121	119
16	Mooralla Poll, 200087	46	126	114	117	107
17	Mumblebone, 200904	39	109	88	100	82
18	Roseville Park Poll, 173116	32	88	96	93	107
19	Stud Park South, 085227	28	74	87	85	87
20	Willandra Poll, 180447 (Link Sire)	27	64	95	100	90
21	Wongara Poll, 190017	33	95	106	99	96

Why are we so committed to Sire Evaluation Trials?

At Connewarran we have been a member of Sheepgenetics, and provided ASBVs to our clients, since 2015. Our commitment to a balanced strategy of objective measurement combined with visual assessment is strong and will remain so. We use the data collected to generate ASBVs for clients. However, we do encourage care, and think all breeders should ask themselves:

“How do I feel about a person I’ve never met, interpreting data I’ve never seen, using a framework (algorithm) unknown to me, to make my breeding decisions?”

That’s basically what ASBVs are. We encourage breeders to recognise that ASBVs essentially mean outsourcing selection decisions to the Sheep genetics algorithm. To be comfortable in that decision a grower must be comfortable with the framework/algorithm. We think the way genes combine is far too complex to be distilled so simply. It’s true of a single joining, and even more so when the interactions across hundreds of thousands of animals each year are considered.

We believe in checks and balances and ground truthing. We are data driven but treat data with care and respect and seek to understand as much as possible how a given conclusion is drawn. We encourage growers to get as close to the data they are using as possible and to do as much interpretation of that data as they can for themselves. We love sire evaluation trials because the data they generate is “real world” data. It is generated on real farms, in real farming conditions, publicly available for all to see and interpret as one wishes. If a grower wants to get some idea of what a bloodline might do on their property, we think looking at results, and hopefully attending a field day, at their closest AMSEA trial site, is a very good way to start.

Carcase traits. Cold tolerance. Breach wrinkle.

Carcase traits

For the last decade or so we have been gradually building the carcase traits of our animals. The primary objective has been to better equip twin lambs with the ability to survive their first 48 hours by giving them more fat to burn to release heat. Mortlake can be a fairly hostile environment at times. Of course, there are numerous other benefits from having strong carcase characteristics within a line of sheep which we don't need to discuss here. Generally, although perhaps not universally, we would like to think that our outside sires have not been radical departures from our type. Rather, as we like to call the additions, "selected infusions". In each year approximately 5-10% of our lambs have been by an outside sire. To recap, the key sires since 2016 have been:

- Anderson 200204 – 2023 drop
- SPS 9333 – 2022 drop
- Stockton Henry – 2021 drop
- Merinotech 10-0115 – 2019 drop
- Willandra Desmond – 2016 – 2020 drops

It has been interesting to note that in the last couple of years we have been seeing the measured carcase characteristics of our animals strengthen, particularly fat. This year we saw fat at considerably higher levels in our leading animals than in any year previously. Interestingly, the most extreme animal was by a Connewarran sire out of one of our ET donor ewes from our carcase family. It will be interesting to see if we can replicate the results we are seeing on property in sire evaluation trials as time goes by. However, there are definitely signs that things are moving in a promising direction.

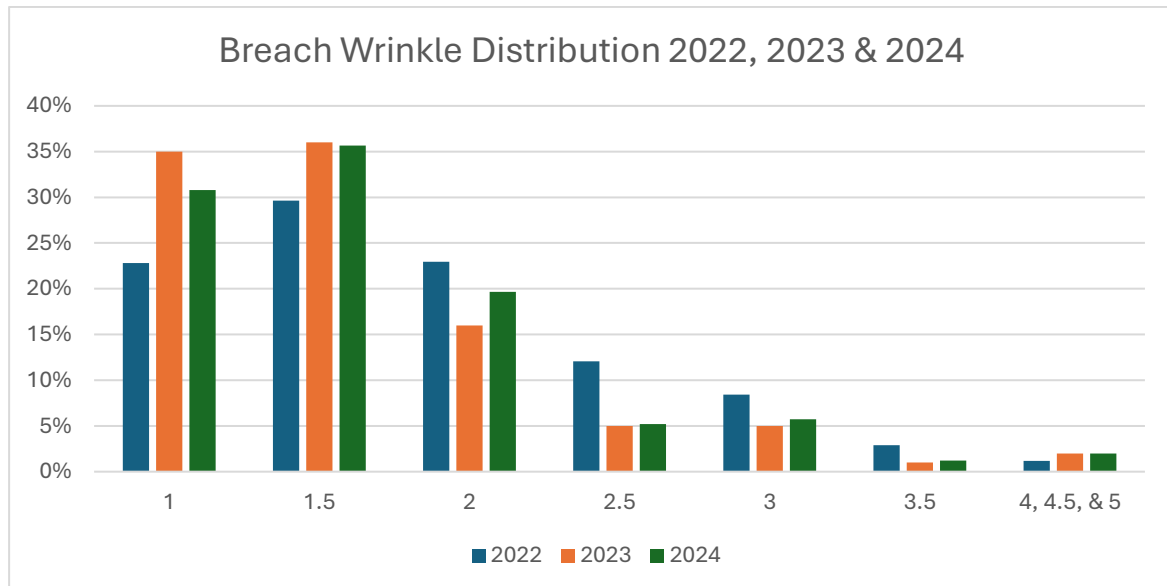
Cold tolerance

Unfortunately, or fortunately, depending on your perspective, this year's stud lambing took place virtually free of cold challenges. Although we haven't crunched the numbers yet, we're expecting less separation than usual between sire lines in terms of lamb survival. We will, however, continue to DNA test all new sires coming into our battery and give preference to those exhibiting cold tolerance gene markers. All indications are, however, that these genetic markers are just one piece of the puzzle when it comes to lamb survival. We are sure that in future more challenging conditions will return which will allow us to more readily identify animals of high genetic merit on the survival front.

More information at <https://research.lincoln.ac.nz/testing-analytical-services/gene-marker-lab>

Breach wrinkle

Our breach wrinkle profile for the 2024 drop is very similar to that of the 2023 drop. In both years 87% of the drop was a wrinkle score 2 or below. In 2024 we had slightly more score 2s and fewer score 1s. Whilst we intend to maintain or slightly decrease our wrinkle over time, we consider the heavy lifting in this area to be done and are now focussing more of our welfare trait emphasis on promoting lower dag animals.



Connewarran Borders

Thank you to our foundation clients who purchased Border Leicester rams in our first selling season. It was a delight to be able to find homes for all our rams and we look forward to offering approximately 10 rams again this season. Our ewe numbers are building and we expect to be able to provide a small but stable and high quality supply of rams into the future.



Annual on-property merino ram sale

We are very excited by the way this year's sale rams are coming on. They have big plain bodies, great conformation and that very high quality, high rainfall, fine Connewarran wool. This year's sale details are as follows:

Wednesday 16 October, 2024

58 poll merinos. 24 merinos

To be sold on property via the helmsman system using the Auctions Plus platform

Approximately 60 rams with NM status suitable for clients participating in accreditation schemes

Pre-inspections are always welcome. We love talking sheep so please feel free to call or visit to discuss how we can help you with your breeding objectives. We are never too busy.

Wishing you all the best for the remainder of the season.

Hamish, Eli, Richard and Jenny Weatherly
Connewarran Merino Stud

