Utilising eID technology to breed more productive sheep

Producer case study: Jamie Spence

Sheep farming with highly variable rainfall

Jamie Spence runs a family owned mixed enterprise farm south east of Borden in WA, comprising 4000 arable hectares with a 3 to 1 crop to pasture ratio. Nalyerlup, the locality where Jamie farms, receives an annual rainfall of 405mm, although this can vary by over 300mm year to year.

“In 2018 and 2019 we had 260mm, whereas 2021 and 2022 were around 570mm,” he said. “We have the rain shadow effect from the Stirling Ranges, so depending on which angle the rain approaches us it can either completely miss us or we can get dumped on.” Jamie recently found historical rain records dating back to the purchase date of the farm which confirmed that this has always been the case.

“1953 was 308mm and then 1955 was 720mm, then 1956 went back down to 300mm,” he commented.

Jamie is the 3rd generation of Spence to run the farm, with his grandfather Horatio being gifted the war service block in 1950 after World War II.

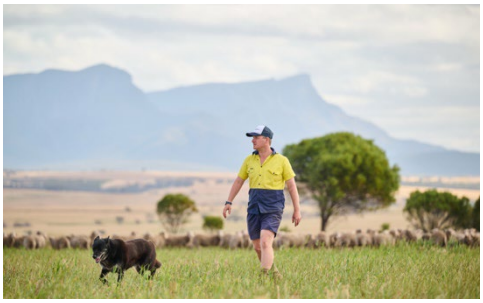


Image 1 Sheep and grain farmer Jamie Spence on his farm near Borden, WA

Jamie returned to the farm full time for harvest in 2015 after spending 7 years as a student in Perth studying marine biology, conservation and wildlife biology, game design and a diploma of education. Over 10 years on, Jamie’s father Allan has now retired and a long term employee manages the cropping enterprise so Jamie can manage the livestock and overall bookkeeping of the farm.

Merino sheep have almost always been a part of the farm in varying numbers depending on seasonal and market conditions. “When I came back to the farm in 2015 we were sitting around 6500 to 7000 total head. A lot of those would be wethers because we keep them around for an extra season or two if we can carry them,” Jamie said. “We’re down to just under 4000 head at the moment off the back of a dry year last year and a few poorer lambings, but hoping to build that back up.”

Harnessing eID technology

As a commercial enterprise with a cropping focus, Jamie is trying to improve the productivity of their sheep so they can be more profitable without needing more paddocks to run them. Traditionally the Spence’s were focused solely on wool character, and there was no objective data forming part of the classing process. “Originally it was all about keeping the wool uniform so all I was doing from a classing perspective was trying to match the wool my dad had. I still struggle to read wool properly but it was purely on texture and visual classing.”

Jamie noticed that while their average flock fibre diameter stayed relatively consistent at 18.5 micron, the ewes weren't cutting very much wool and they consistently had issues with dags and flystrike. Jamie decided to bring some objective measurements into his decision making and has been steadily increasing the amount of data he collects on his sheep since he began tagging with eIDs in 2020. "At the moment our breeding objective is to try and increase fleece weight, reduce dags and fly burden. And I'm trying to boost lamb survival," he said.

"We've only been doing 3-4kg fleeces, which is why we've started fleece weighing our maidens," he remarked. "The past three seasons I've been doing dag scores as well at crutching, which is where eIDs have come in handy. They get a dag score, flystrike score and wrinkle score."

Jamie started his data collection by recording at lamb marking whether a lamb was born as a single or twin, and from an early or late drop. This was an easy place to start as it required no extra financial or time inputs – Jamie only needed to record the tag numbers he put into each mob at lamb marking. Shortly after, he purchased a Gallagher HR5 stick reader, followed quickly by a Gallagher TWR5 indicator to help with classing his hoggets. The indicator displays the fleece weight data and scores collected from Jamie's hoggets so he can use the information in conjunction with a visual assessment to determine if a maiden is a good replacement ewe.

With his first fleece weight records on the early and late drop hoggets, Jamie has trialed manipulating the data depending on the status of each hogget to make it more comparable. "Because they were young hoggets the fleeces weren't all that heavy, so I think the average was around 2.6-2.8kg," he explained. "If it was a younger sheep I gave it a 0.2kg benefit, and if it was a twin I gave it another 0.2kg." This made it easier to compare an early born twin with a late born single, which would be expected to cut more. "I had a young twin which still cut almost 4kg in fleece so that was pretty exciting," Jamie remarked.

Lightening the load

Despite the small additional labour input required to collect and utilise sheep data, Jamie is determined not to let his sheep enterprise get too complicated, with reducing the stress of sheep farming at the top of his priority list. "At the moment I'm trying to alleviate as much stress as possible by making the sheep we have more productive. I don't want to add much cost or complication by running a nucleus flock yet or trying to breed our own rams. I have other things I want to invest in first to make running the sheep easier," he said. "I'm trying to maximise carrying capacity and keeping sheep on the farm without abusing the paddocks too much."

Jamie's current goal is to get back up to carrying 6500 head of sheep total over the summer and to improve fleece cut to over 4kg as a per head average over the whole flock. He also hopes to reduce weaner mortality. "At the moment that ranges from 5-10% between marking and shearing in February so it would be great to drop that back."

As Jamie is acknowledging birth type (born as a single or a twin, either early or late drop) when he classes his hoggets he may also see a boost in reproduction in the coming years as he is not preferentially selecting early born single lambs. These lambs are likely to be heavier and more mature at classing time and are often selected for that reason if the classer is unable to differentiate between birth types.



Image 2 Jamie Spence with his two farm dogs on his property

Jamie has already seen positive changes in his flock's ease of management as a direct result of eID data collection and utilisation. "I think the dag and wrinkle scoring has been making a difference already – I feel like the lambs coming through more recently have been a bit cleaner," he said.

Jamie has applied for two grants to update the old shearing shed on the farm to a more ergonomic design and to help with the purchase of a bulk handler and autodrafter to make everyday husbandry tasks easier. "I had surgery on my back recently and with our current infrastructure I'm not able to spend hours in the yards bent over a race to drench," he explained.

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Lessons for other farmers

Jamie's primary advice for other farmers choosing to take up eID data collection is to invest in the right technology early in the piece. "It gives you the capacity to do more even if you're trying to keep it simple. So while it might be a larger cost upfront, if you can look at what you want to be doing in 10 years and what you want to achieve now, if you can get the right equipment to start with you'll get them there quicker."

As another handy tip, Jamie has taken up the habit of educating lambs to run into the shearing shed prior to their first shearing, which has saved a lot of time and headaches down the track. "I started by running lambs when they were still with their mums up into the shearing shed and out through a side ramp, so they weren't being handled in the shed at all – just running through. Then I did it again with the lambs on their own when they were weaned. So when it came to shearing them we weren't throwing them into the shed one by one, they flowed in really easily," he said. "It might make today's job take an extra hour or two but it will save you five hours of stress down the track."

Looking ahead, Jamie hopes to attend a few industry events to get some insights into further improvements he can make to his sheep enterprise. "I'd love to go to LambEx this year if I can make it fit into the budget. I went when it was in Perth in 2019 and I think it inspired me to make some changes at home," he remarked.

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