

Gulbali Stories — Sheep Heat Stress Supplement Trial

Feeding Algimun to confined sheep

Guest: Dr Susan Robertson & Jim Meckiff | Host: Christine Storer

Welcome to Gulbali Stories, where we share inspiring tales of innovation, resilience and sustainability in agriculture, water and the environment from Australia and beyond.

Christine Storer

Welcome to this podcast, the results of experiments for the Climate Smart Agriculture program under the Natural Heritage Trust funding that was presented at the MerinoLink workshop in New South Wales and Victoria in 2026. We're looking at sheep farming and trying to make it more sustainable with heat stress in a variable climate, and we're talking about some experiments run by Dr Susan Robertson at Charles Sturt University, looking at the novel supplement Algimun, along with our livestock production expert Jim Meckiff. Susan, tell us about the experiment.

Dr Susan Robertson

Well, this was the first study that we conducted, and basically we know heat stress has a major impact on reproductive performance of your ewes and rams in a changing climate. Increasing heat stress over summer is likely to be impacting on the pregnancy rate and the conception rates of ewes. So, we wanted to test this novel supplement, Algimun, to see can that actually be effective in sheep. It has been effective in other species but not tested in sheep. The other advantage of the Algimun is that it has increased the immunity status of other species, so again there could be potential benefits for lamb survival.

So, we ran this trial from a February joining in 2025, you know, when it's hot, and took those ewes right through to lambing in July or August so — winter lambing. So, the experiment was designed with three replicates of three treatments and involved 900 ewes which were joined in February.

Now the results — we didn't get any increase in the percentage of ewes joined that were pregnant, or the percentage of multiple fetuses in those ewes. That was primarily because they didn't actually eat sufficient of the novel lick.

How do we know it was different? Well, we had a control in there. The control had no supplement at all at joining — they were just grazing crop stubbles or dead pasture. We had a base mineral lick, a standard ewe and lamb lick provided by Four Seasons Company, and then we had that same lick with Algimun added. So there was no difference between those three treatments for joining performance.

The pregnant ewes then went into a lamb survival trial, as I said, in July/August 2025, and again there was no difference in the lamb survival — lambs marked per ewe joined, or lambs marked per ewe lambing, from those three different licks. The difference between the joining results is what used a slightly different lick. In order to get the intake of the lick up to a level which would provide sufficient Algimun intake, we actually changed it to a pro-lamb lick, again provided by Four Seasons Company. In any case, there's no difference between the

treatments. If you look at the graph on the website, yes, there is a slight decrease in fertility of those ewes that were given the mineral lick — that lick without Algimun — whereas the control and the Algimun lick were not different, and that was basically due to one ram not working well in one group of that treatment.

Jim Meckiff

Yeah, good work here, Susan, and it's nice to know that something didn't work. It's nice to know that upfront. Obviously, the control didn't give us an advantage over the treatments, or the treatments didn't give us an advantage over the controls. It's very important tonight that good experimental design here — a replicated trial has given us this result, rather than just a comparison, a treated versus an untreated in one treatment group compared to another treatment group, which can easily get the results wrong if you didn't have good experimental design here.

Christine Storer

And just a question that came from the floor was, you know, is a mineral lick required, and comment you raised was whether or not you need a mineral lick, Susan?

Dr Susan Robertson

Yeah, so mineral licks — certainly there are circumstances where a mineral lick would be recommended. So, this trial was done at Wagga, where there aren't, as a generalisation, specific mineral deficiencies. There are contexts, like raising crops, where certainly a mineral lick would be recommended to provide calcium and magnesium in particular. But in this case there was no response because the ewes were not deficient in any particular minerals, which we know from blood tests that we actually did.

So the take-home messages from this study was that we can't actually say what the effect of Algimun was at joining because the lick intake was insufficient. We did have adequate lick intake at lambing, but that did not increase lamb survival either for the base mineral lick or the mineral lick with Algimun, so there was really no benefit from providing those licks.

The point I did forget to mention was that during lambing we were feeding grain to all treatments throughout lambing because of the seasonal conditions, and the control group in that case did have a lime, cosmic salt, loose lick — but again the results clearly say there was no difference between the treatments at lambing. It might be recommended to provide some sort of mineral supplement at lambing in some conditions, and that might reduce your risk of some metabolic diseases, but certainly in this experiment there was no benefit in providing the different sorts of licks.

Christine Storer

Thanks Susan, Jim. And if anyone listening to this podcast would like to know more about the different requirements for confinement feeding, there are other materials on the [websites](#). Have a look at those, and we'll have more [podcasts](#) on future experiments.

Thank you for listening to Gulbali Stories. Discover more about research and partnerships at the Gulbali Institute at Charles Sturt University by visiting our website or following us on social media at [#GulbaliInstitute](#). We look forward to sharing more stories with you soon.

Study 1. Novel supplement Algimun® | (seaweed extract)

Mineral lick and Algimun lick did not improve fetus/ewe or lamb survival

