

SA Flocks put melatonin to test for lifting twin lamb survival

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SA based researchers have found supplementing ewes carrying twins with melatonin could help lift lamb survival by more than 10 per cent. And this lambing season they are aiming to see if these exciting results can be replicated in the paddock with 11 flocks across SA as well as one Vic flock involved.

Nearly 5000 ewes scanned-in-lamb with twins will be given a Regulin implant behind their ear at about 90 days into pregnancy. Regulin is currently only registered for rams to enhance their reproductive performance. The ewes in the project will be monitored at lambing and lambs followed to weaning.

Speaking at a Mackillop Farm Management Group workshop at Lucindale last week, SARDI senior research officer Alice Weaver who is one of the researchers involved in the project, said lamb deaths were costing the sheep industry at least \$540 million a year. Birthing difficulties, starvation and mismothering account for the majority of these losses in the critical first 72 hours of life.

Dr Weaver says all lambs experience some form of hypoxia (oxygen deprivation) during the birthing process but the risk increases significantly in the second born lambs. "The first one (lamb) is generally expelled quite quickly, it is the second one that is quite at risk and can spend much longer, up to two hours in the birth canal," she said.

In the past three and a half years University of Adelaide and SARDI researchers have looked at novel strategies to lift the weaning rate of the national flock. This includes supplementing ewes with caffeine, rumen protected amino acids, betaine and melatonin to increase the ability of the lambs to cope with hypoxia.

In intensively housed animals the project funded by Meat & Livestock Australia has found no difference in the survival of lambs born as singles but 13-14 per cent greater survival in twin born lambs whose mothers had been given melatonin. Similar results were observed in the paddock at Minnipa Research Centre. "The melatonin freely crosses the placenta allowing delivery to the foetus via maternal supplementation," she said.

Last year two White Suffolk studs, Ashmore at Wasleys and Illoura at Moorlands, along with a Merino flock at Black Springs were involved in a smaller trial with their twin bearing ewes.

"At Ashmore there was about a five per cent lift in lamb survival in the melatonin mob but at Illoura there was a 98 per cent survival in the control group which is pretty phenomenal so the melatonin treated lambs were just the same," she said. "We did see a slight increase in weaning weight in the melatonin group which may point to a lift in milk production in the (treated) ewes."

Dr Weaver says this year should give a better understanding of the benefits of melatonin with a range of different breeds involved as well as a range of production systems.

She expects the results to be available next year and says if it stacks up CEVA, the manufacturer of Regulin, could apply for a label change of its Regulin product to include pregnant ewes.

"It is still early days and it won't be a silver bullet for all producers but it appears to be cost effective if we can get a 10 per cent or more lift in weaning rate," she said. "The implants are not cheap at \$7 a dose or \$2400 per 1000 ewes but if producers can get an extra 26 or 28 lambs weaned it will be worth it."

Illoura stud principal Allan Piggott says he was keen to be part of the project last year as improving lamb survival is important from both an economic and animal welfare perspective. "We just need to do some more research and see where we can get the most benefit and return on investment," he said.