Heavier sheep a refuge for drench-susceptible worms

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Selective treatment of Merino ewes may help the battle against drench-resistant worms. Credit: Bruce Christensen

Leaving heavier Merino ewes untreated for worms while treating their skinnier counterparts may help combat drench-resistant worms, research suggests.

A study by Murdoch University PhD candidate and Sheep Development Officer for the Department of Agriculture and Food WA, Meghan Cornelius, suggests sheep with a high body condition score (BCS) can be left untreated without causing major production loss.

Instead, opting to selectively treat skinnier sheep—those with a lower BCS—can help dilute the resistant worm population and delay the onset of drench resistance, Miss Cornelius says.

"The aim is to get as many non-resistant scour worms in the population as possible," she says.

"We wanted to leave a proportion of the sheep in the flock untreated for worms."

These untreated sheep will continue to shed worms in their dung.

"This provides worms onto the pasture that haven't been exposed to chemicals, and therefore they're not resistant, and this allows the non-resistant worms to breed with the resistant worms," Miss Cornelius says.

This interbreeding produces a proportion of drench-susceptible worms in the next generation, slowing the descent towards population-wide resistance.

Year-long study conducted in Great Southern

Two commercial farms in Kojonup and Woodanilling took part in the year-long study in 2010, with approximately 250 adult Merino ewes on both farms being tested.

"At each site we spilt the sheep into two groups; one half was treated [with anti-worm treatments] over the length of the experiment, so they would never have a worm burden, and one half was not treated," Miss Cornelius says.

"We would monitor the sheep for body condition, body weight and worm egg count every couple of months," she says.

Miss Cornelius determined that BCS could be used as an effective tool for deciding which ewes could be left untreated for worms.

"On one site we observed that the sheep in high body condition score that were left untreated were still doing as well as the sheep in the high condition score that were treated," she says.

The study showed that the health of worm-treated low-BCS sheep improved , but that untreated low-BCS sheep were three times more likely to become critically underweight (BCS