FITT Final Report 08FT209
What is the response to a pre-lamb drench?

Years of trial: August – December 2008
Group that proposed the trial: The Ewe Drenching Sceptics
Region: Tararua
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(1) Introduction – background to the project

Sixty six percent of farmers drench ewes before lambing. National recommendations of how to reduce the development of drench resistance are that ewe drenching around lambing should be limited. Therefore, any action that risks the effectiveness of drenches has to be balanced against the benefits achieved by those drenches.

There is limited published data that shows a production response to drenching ewes before lambing. Despite this, there is widespread farmer perception that drenching ewes before lambing gives a production response. For many, the perception is that the more persistent acting that drench is, the more the production response is. Drench companies invest a huge amount of money in fuelling this perception.

This group of farmers wanted to prove to themselves what advantage there was from drenching their ewes before lambing. A new product on the market for this purpose, Dectomax injection, offered an easy to administer option with minimal sustainability cost because of its limited persistency.

A trial was set up on each farm to measure the response to treating ewes with this product before lambing.

(2) Key aims – what was the project trying to achieve?

The key aims of this trial were to record three key production outcomes that could be expected from drenching ewes before lambing. Those key production outcomes are: increased lamb weaning weight; increased ewe weaning weight; increased ewe condition score.

While increased lamb weaning weight has a clear economic advantage, there is equal economic advantage in any ewe weight or condition score gained before the summer.

(3) Key findings & recommendations for farmers

There was a significant treatment effect on lamb docking weight of 0.3kg and on lamb weaning weight of 0.7kg. There was also a small advantage of 0.2 of a body condition score present in treated ewes at weaning. These differences were statistically significant.

Whilst these results suggest there are potential gains from treating ewes with Dectomax ™ injection before lambing; these benefits must be balanced against the sustainability concerns around the use of medium and long acting drench products in the pre lamb period.

Farmers are encouraged to work with their own animal health advisor to arrive at the best approach for pre lamb worm management in their ewes

(4) Methodology – what was done in the trial?

The study was done on the three current Monitor Farms in the Tararua region. On each farm two hundred mixed age ewes, scanned as twin bearing, were tagged, body condition scored and weighed between ten and twenty days before lambing. Half the ewes were treated with injectable doramectin (Dectomax, Pfizer) at a rate of 1mL/50kg.

The ewes were run in bigger mobs with other MA ewes on two farms and run in their own mob on the other.

At docking, the ewes were weighed and body condition scored. At this time they were also udder painted using a red aerosol spray for treated ewes and a blue spray for control ewes. The ewes and lambs were reunited for two hours and then re-yarded. Lambs were selected from treated or untreated ewes based on the colour of their heads. It was very easy to allocate lambs to mobs as the vast majority of the lambs had only one colour on their head. The lambs were then tagged and weighed.

At weaning, the ewes were body condition scored and weighed and lambs were weighed.

At each visit – treatment, docking and weaning – faecal egg counts were taken from a representative sample of the treated and untreated ewes.

(5) Results

Data was statistically analysed using an ANOVA test. The effects, whether positive or not, were the same on all farms.

The results showed:

- No significant effect of treatment on ewe liveweight at any time
- No significant effect of treatment on ewe body condition at docking
- A significant effect (0.01 probability) of treatment on ewe body condition at weaning, with a gain of 0.2 BCS's
- No significant difference of treatment of ewes initially in either a high or low BCS i.e. the treatment effect on BCS in low BCS ewes was the same as in high BCS ewes
- A significant treatment effect (0.05 probability) on lamb docking weight of 0.3kg
- A significant treatment effect (0.05 probability) on lamb weaning weight of 0.7kg

(6) Conclusions – what are the 'take home' messages?

The gain in ewe condition score from treatment is probably not real even though the study showed it was. The large variation in condition score measuring probably makes that recorded gain questionable.

Because the ewes at the start were all at a different stage of pregnancy, even though they were close to lambing, the starting weight in this trial could not be compared to the weaning weight.

The most useful result of this trial was the recorded gain in lamb weaning weight. The cost benefit analysis of this ewe treatment shows a 3:1 return on the cost of treatment (a $0.80 treatment cost returned an average $2.50 extra in lamb weight if weaned lambs are worth $2/kg lamb and the twinning ewes weaned 175%.)

It was surprising that the lamb weaning gain was the same on all farms given that the feeding level on each property was different. On one farm the average gain in ewe condition score was over one while on another the ewes lost over one condition score. Current industry recommendations suggest that well fed ewes over lambing/lactation will not give an economical response to pre-lamb drenching. This study does not support this recommendation.

The conflict that this study presents us with is that the recommendations for how to reduce the selection pressure for drench resistance are at odds with actions that add value to our lambing systems. We therefore have to find ways to get the benefits of both objectives.

Ways that we could do this are:

- Run un-drenched sheep amongst the drenched ewes (dry hoggets, single ewes)
- Be prepared to sacrifice some production in these twinning ewes by leaving some not drenched
- Find out where that lamb weaning weight gain is coming from. Even though light condition ewes behaved no differently from good condition ewes in how they gained condition after lambing, it is possible that the lambs grew faster from treated light ewes compared to treated good condition ewes

(7) How will the group apply the project results to agri-businesses?

Drenching twinning ewes before lambing does increase ewe performance. Farmers need to be aware of the sustainability costs of this gain. Therefore the decision to drench ewes before lambing needs to be part of a whole farm plan that identifies all of the pressures selecting for drench resistance and identifies how these can most economically be reduced.

This study also challenges the industry to research the production aspects of its sustainability recommendations so that farmers can quantify the risks that they could be taking. It also challenges the industry to better define where such production gains come from. For example it is possible that treated light condition ewes give a much bigger production gain than treated good condition ewes, in which case it would be valid to treat only light condition ewes.

(8) Contact points for more information

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