

***FITT Interim Report (09FT222)***  
***Lamb and ewe responses to a pre-lamb drench***

<b>Years of trial:</b>	2009 - 2010
<b>Group that proposed the trial:</b>	The ewe drenching sceptics
<b>Region:</b>	Manawatu
<b>Contact person(s):</b>	Trevor Cook, Ginny Dodunski, Greta Baynes Totally Vets, Feilding

### **(1) Introduction – background to the project**

A preliminary FITT funded study was undertaken in 2008 to ascertain the production benefit (if any) of treating mixed age twinning ewes with Dectomax™ one to three weeks before lambing. This work showed a significant weaning weight advantage in lambs born to treated ewes compared to lambs born to non-treated ewes. The production benefits were the same in flocks that were fed well over the spring as those not fed well over the spring.

This is not an outcome that is compatible with the sustainability messages around the use of pre-lamb drenching being promoted in the industry; specifically that light condition and/or underfed ewes will give the biggest production response to being drenched before lambing. There is no published work that confirms the validity of this advice. If indeed lighter and/or underfed ewes do show the biggest response to drenching, then the above sustainability message is much more palatable to farmers trying to protect their production at the same time as protecting their drenches.

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

To determine if treating for worms in light conditioned ewes pre-lamb gives a bigger production response than treating ewes in good condition at that time.

### **(3) Key findings & recommendations for farmers**

- Condition score of ewes before lambing had no effect on any productive responses to a pre-lamb drench with Dectomax .
- Lambs from the high condition score ewes were heavier at docking than lambs from low condition score ewes but kept this difference to weaning.
- Low condition score ewes held their condition score by docking whereas high condition score ewes lost condition and gained more condition by weaning.
- Body condition score had no effect on dags or faecal egg count.

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

Three farms were enrolled, with a total of 386 mixed age, first cycle twinning ewes. At the time of pre-lamb vaccinating all ewes were tagged, condition scored and dag scored. Ewes were Body Condition Scored (BCS)  $\leq 2$  or  $\geq 3$  thus giving a thin group and a fat group. Each group was treated with injectable doramectin (Dectomax™, Pfizer) at a rate of 1mL/50kg. Fifteen faecal egg counts (FECs) and a larval culture were performed on both the fat and thin groups.

At docking, all ewes were condition scored and a random FEC done on 15 ewes from each group. A larval culture was performed on each group. The ewes were udder painted according to whether they were fat (red aerosol spray) or thin (blue) at treatment time. The ewes and lambs were allowed to mother up for two hours. The lambs were tagged according to their head colour (red heads the progeny of fat ewes, blue of thin) and weighed.

At weaning the ewes were condition scored and dag scored and the lambs weighed. A FEC was done on 15 ewes from each group.

#### **(5) Results**

Ewe condition score change:

- Low condition score ewes improved their condition score by docking whereas high condition score ewes lost condition (0.03 BCS cf -1.1 BCS) (P=0.001)
- By weaning low condition score ewes had increased their BCS by 0.2 whereas high condition score ewes lost 0.8 BCS (P=0.001).

This result can be interpreted as a pre-lamb drench giving more benefit to light condition score ewes compared to high condition score ewes. Equally though light condition score ewes could always gain more condition from pre lamb to weaning.

Lamb weights and weight gain change:

- Lambs from the high condition score ewes were heavier at docking by 0.7 kgs (P=0.01)
- That weight advantage at docking was the same at weaning.

This result is in keeping with other studies that show the biggest effect of ewe condition score at lambing is the weight of the lamb at docking. This is probably a reflection of a higher birth weight with possibly a component of higher milk production.

Ewe dag score and Faecal Egg Count (FEC):

- There was no significant difference in dag score or FEC of ewes at docking or at weaning.
- The worm species profile between light and fat ewes was no different.

## **(6) Conclusions – what are the ‘take home’ messages?**

Contrary to industry messages this study does not support the advice that light condition scores will give a much bigger production response to a pre-lamb worm drench than good condition score ewes. There is a bigger gain in the condition of light ewes compared to good condition ewes but from this study it cannot be conclusively attributed to the pre-lamb treatment.

This result suggests that for farmers to not risk productivity but to minimise the sustainability costs of ewe drenching, other approaches to maintaining refugia activity must be considered. For example running untreated single ewes with treated multiple ewes could be a better solution compared to just not drenching good condition ewes.

This study confirms the need for more trial work around the productivity benefits of drenching ewes around lambing time so that those benefits can be balanced against any sustainability costs. Randomised replicates of this study would validate this study.

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

The outcome from this study will be communicated to the Manawatu Monitor Farm community group. Thereafter it will be made available to the technical advisory group of Wormwise to help with the advice being given to farmers from that group. It will also be reported in Country-Wide, in the Totally Vets newsletter and website and discussed at local sheep seminars provided by Totally Vets.

## **(8) Contact points for more information**

Trevor Cook (Veterinarian & Consultant), Ginny Dodunski (Veterinarian) & Greta Baynes (Veterinarian).

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To find out more about other FITT projects, phone Meat & Wool New Zealand on 0800 496 657.

## **(9) Appendices –extra information**

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