

# Drench resistant worms on the NSW North Coast

Update from the Duck Creek Research Station trial in Spring 2020

## Introduction

240 cross bred yearling steers sourced from across the north coast were used to test the efficacy of some commercially available worm control products.

## Products Tested

- moxidectin pour on
- doramectin pour on
- levamisole oral
- oxfendazole oral
- moxidectin + levamisole combination pour on



## Key outcomes

1. *Haemonchus* (barbers pole worm) and *Cooperia* were resistant to the single active doramectin pour on.
2. Ineffective control of *Haemonchus* reduced weight gain by 10kg over 28 days, and those steers never caught up over the 90 day trial.
3. The levamisole and oxfendazole single active oral drenches and the moxidectin + levamisole dual active pour on were effective against *Haemonchus* and *Cooperia*.
4. Moxidectin single active pour on was effective against *Haemonchus* but not *Cooperia*.
5. Ineffective control of *Cooperia* had a minimal to no impact on animal weight gain.
6. Where possible worms should be targeted with two different active ingredients, to protect weight gain and manage resistance. Combination products are one option, using two or more products is another.
7. Worm testing and identifying key worm species is key to any effective worm control program.

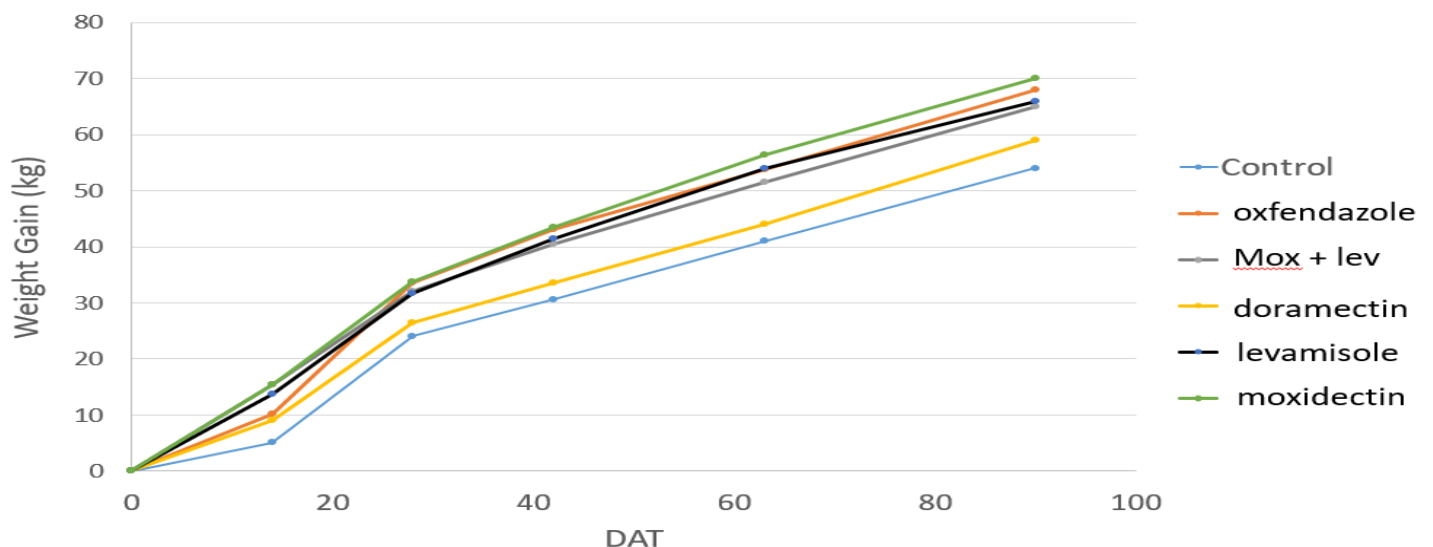


Figure 1 Cumulative steer weight gains up to 90 days after treatment (DAT) after being treated with different worm control products.

## Summary

The steers averaged 305kg LWT at the start of the trial and were allocated to one of 6 x 40 head treatment groups. Steers were weighed 6 times over the course of the trial, while faecal samples were collected 5 times, from 15 animals in each treatment group, to monitor worm egg counts and species.

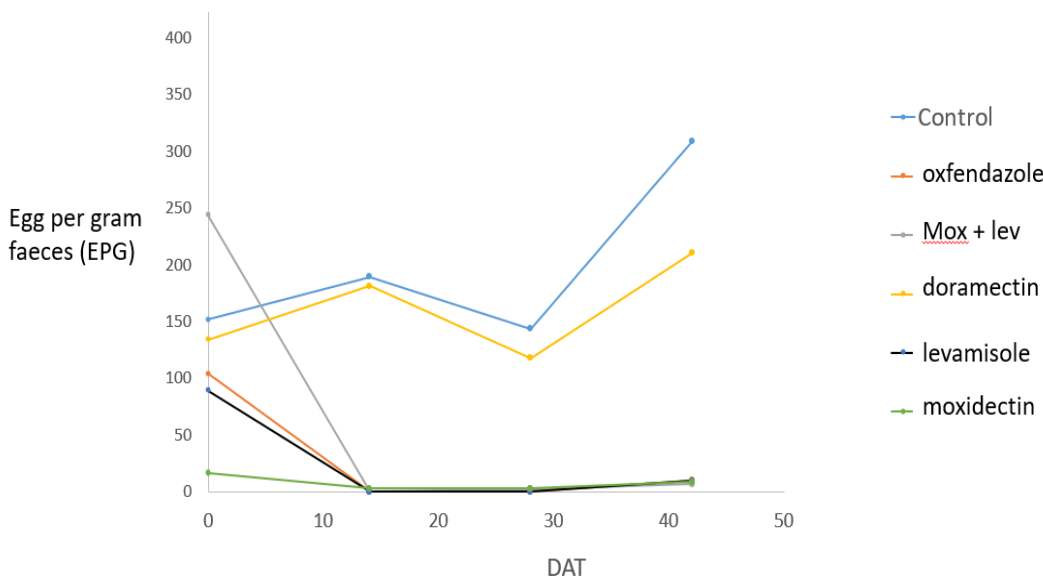
The steers remained as a single herd up until day 0 (treatment day). Treatment groups were then separated for 3 days to prevent the pour on products being licked by other steers and were then run as a single mob for the duration of the trial. Steers rotationally grazed tropical pastures (paspalum, setaria, carpet grass) oversown with ryegrass.

## Results

Steer weight gain averaged 1.4kg/hd/d prior to treatments being applied. This dropped to 0.9kg/hd/d at 14 days after treatment (DAT), most likely due to social dislocation of the mob as treatment groups were separated.

Worm burdens impacted weight gains during this time and the steers treated with doramectin pour-on and control (no worm treatment) were around 10kg lighter than others at 28 DAT (Figure 1).

The steers were infested with both *Haemonchus* and *Cooperia*, although infection levels varied among the steers. The doramectin and control treatments had higher *Haemonchus* WEC than the other treatments (Figure 2). This resistance pattern mirrored steer weight gain (Figure 1), suggesting that *Haemonchus* had the greatest impact on animal performance.



**Figure 2 *Haemonchus* worm egg counts in crossbred yearling steers up to 42 days after treatment (DAT) with a range of products.**

The trial was a collaborative project between NSW Department of Primary Industries, North Coast Local Land Services and Virbac Australia, specifically Dr Matthew Ball, and Craig Hosking from Virbac, Michael Beaumont and his team from NSW Department of Primary Industries Research Services, Dr Liz Bolin, Dr Philip Kemsley District Veterinarians North Coast Local Land Services and Jessica Lock Animal Health Biosecurity Officer North Coast Local Land Services



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