



Effect of B-Act[®] and BMD[®] on performance of broiler chickens experimentally induced with necrotic enteritis

Trial description

1 Set-up

- **Location:** Southern Poultry Research, USA
- **Animals:**
 - 192 Male Cobb broilers
 - 48 birds per treatment divided over 6 replicates
- **Set-up:** Birds were infected to induce necrotic enteritis. Therefore, 10⁸ cfu of *Clostridium perfringens* (CP) per bird were orally administered to all broilers apart from those assigned to the non-medicated, non-challenged group (positive control group) 3 times on day (d) 18, d19, and d20. In addition all the birds were challenged orally with coccidiosis on d13 (*Eimeria maxima*, approximately 5000 oocysts).

2 Treatments

Birds were randomly assigned to the following 4 treatments:

- Non-medicated, non-infected group (positive control, PC)
- Non-medicated, infected group (negative control, NC)
- BMD[®] (bacitracin methylene disalicylate at 50 g/mton, CP infected)
- B-Act[®] group (0.5 kg/mton, CP infected)

B-Act[®] is a probiotic feed additive containing viable spores of a strain of *Bacillus licheniformis* (DSM 28710).

3 Measured parameters

All birds were weighed by cage on d28. Feed was weighed at the beginning of the trial and remaining feed was weight at the end of the trial and feed conversion ratio calculated accordingly.

Results

Total weight gain (d 0-28, g), feed conversion ratio and mortality (%) are shown in Table 1.

Table 1. Total weight gain (day 0-28, g), feed conversion ratio and mortality (%)

Treatments	Total weight gain from day 0-28 (g)	Feed conversion ratio	Mortality (%)
Positive control	0.946 ^a	1.601 ^a	0.0 ^a
Negative control	0.709 ^b	2.087 ^b	16.7 ^b
BMD [®] (50 g/mton)	0.839 ^c	1.696 ^c	0.0 ^a
B-Act [®] (0.5 kg/mton)	0.875 ^c	1.699 ^c	2.1 ^a

^{a,b} values with different superscripts within a column differ significantly (P<0.05)

Broilers receiving B-Act® at 0.5 kg/mton showed the same total weight gain as the BMD® group (Figure 1) and weight gain was significantly ($P<0.05$) improved compared to the negative control group.

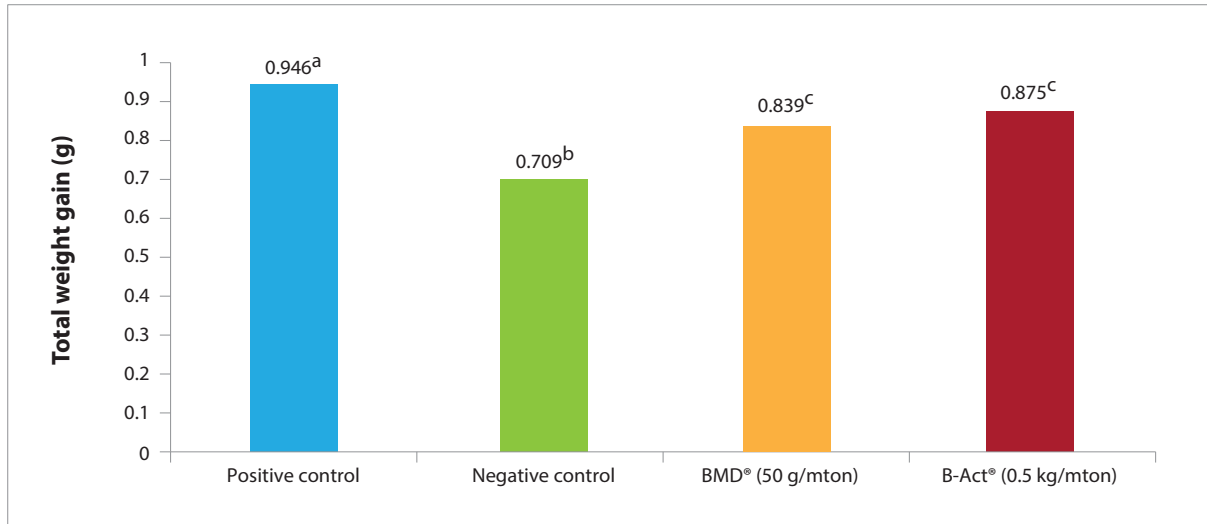


Figure 1. Total weight gain of broilers from day 0 to 28 (g)

Broilers receiving B-Act® at 0.5 kg/mton showed the same feed conversion ratio as the BMD® group and feed conversion (Figure 2) was significantly improved compared to the negative control group.

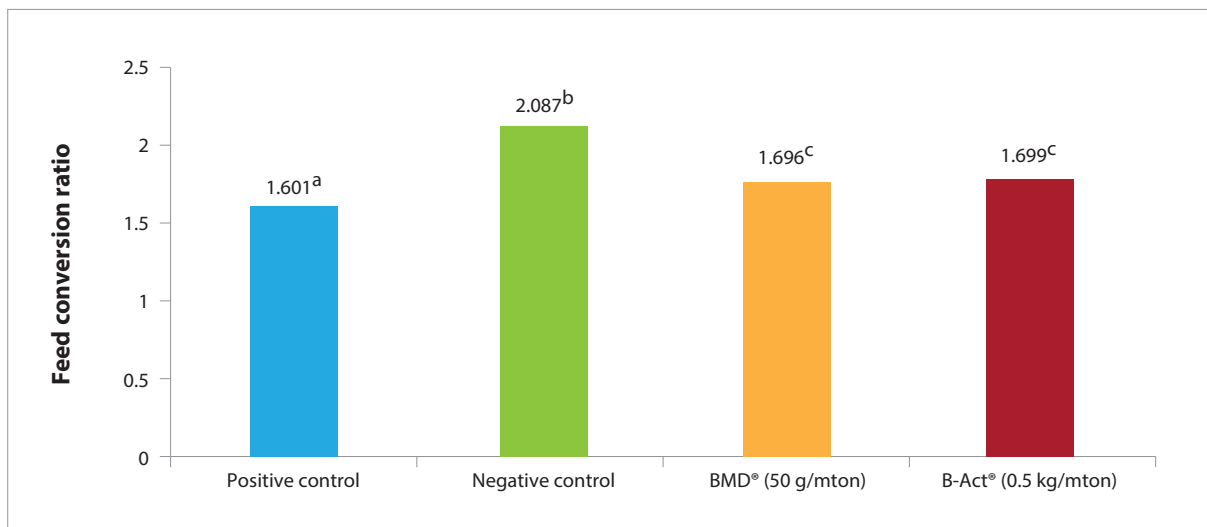


Figure 2. Feed conversion ratio of broilers from day 0-28

CP challenge resulted in 16.7% mortality in the non-medicated group which was significantly reduced by both treatment groups as shown in Table 1.

Conclusion

Results have shown, that B-Act® at 0.5 kg/mton of feed shows the same benefits than BMD® at 50 g/mton of feed in terms of weight gain and feed conversion ratio of broilers with necrotic enteritis.