



## Efficacy of B-Act® in controlling experimentally induced necrotic enteritis in broilers

### Trial description

#### 1 Set-up

- **Location:** Poulpharm, Belgium
- **Animals:**
  - Male Ross 308 broilers
  - 80 birds per treatment divided over 5 replicates
- **Set up:** Birds were infected to induce necrotic enteritis. Therefore  $10^9$  cfu of *Clostridium perfringens* per bird were orally administered to all broilers 3 times on D19, D20, D21 and D22. In addition all the birds were challenged orally with coccidiosis on D20.

#### 2 Treatments

- **Infected Untreated Control (IUC):** birds were infected and fed a high protein diet
- **Infected Treated Control (ITC):** birds were infected, fed a high protein diet and were treated with amoxicillin in the water (20 mg/kg bodyweight) from D23
- **B-Act® (B-Act®):** birds were infected and fed a high protein diet + 2 kg B-Act®/mton of feed ( $6.4 \times 10^{12}$  cfu *Bacillus licheniformis*/mton of feed) during starter and grower

#### 3 Measured parameters

- On days 24 and 25, 4 animals per pen were sacrificed for scoring of necrotic enteritis lesions. The scoring was based on a 0 to 4 score as follows:
  - Lesion Score 0 = No lesions
  - Lesion Score 1 = Mild lesions
  - Lesion Score 2 = Moderate lesions
  - Lesion Score 3 = Severe lesions
  - Lesion Score 4 = Extremely severe lesions, or death

## Results

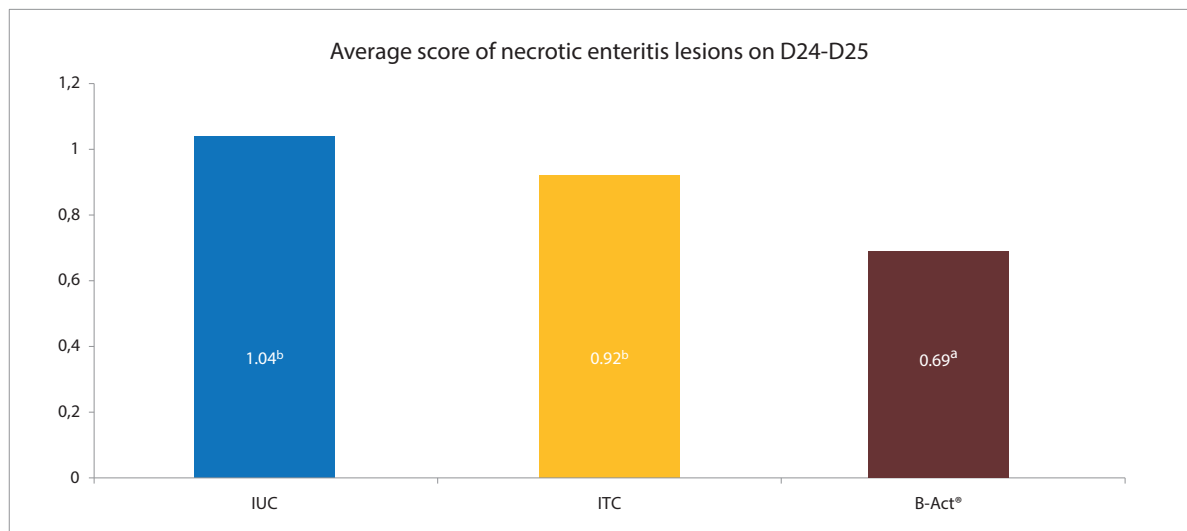
- The percentage of broilers without necrotic enteritis lesions was highest in the B-Act® group versus the IUC and the ITC groups (Table 1). In addition, none of the B-Act® supplemented birds showed lesions with score 2 or higher.

Table 1. Total percentage of broilers per necrotic enteritis lesion score on D24 and D25.

Group	NE score				
	0	1	2	3	4
Infected Untreated Control (IUC)	19	65	15	0	2
Infected Treated Control (ITC)	12	83	4	0	0
Infected+B-Act® (B-Act®)	31	69	0	0	0

- Feeding B-Act® to broilers significantly reduced the average score of necrotic enteritis versus the IUC and versus the broilers treated with amoxicillin (Fig 1).

Fig. 1



Different letters mean statistically different at  $p < 0.05$ .

## Conclusion

Supplementing B-Act® to broilers induced with necrotic enteritis results in:

- a lower number of birds with necrotic enteritis lesions
- a significant reduction in average lesion score