



## Effect of B-Act® on gut microbiota of turkeys

### Trial description

#### 1. Experimental design

- **Location:** commercial turkey farm, Germany
- **Animals:**
  - 23 300 14-days-old BUT Big 6 male turkeys
  - Birds were divided over 2 houses (control vs. B-Act®)
- **Set-up:**
  - Animals were fed a basal diet in a 3-phase feeding system (starter from day 0 to 9, grower from day 9 to 32 and finisher from day 32 to to 64), with the animals in the control with probiotic BioPlus 2B (Chr. Hansen, *B. subtilis* and *B. licheniformis* combination) in the first two phases.
- **Trial duration:** 64 days

#### 2. Treatments

- **2 groups:**
  - Control group fed a basal diet with probiotic BioPlus 2B supplementation in the first two feed phases
  - B-Act® group fed a basal diet supplemented with 0.5 kg B-Act®/mton of feed ( $1.6 \times 10^{12}$  CFU *Bacillus licheniformis*/mton of feed) in all three feed phases

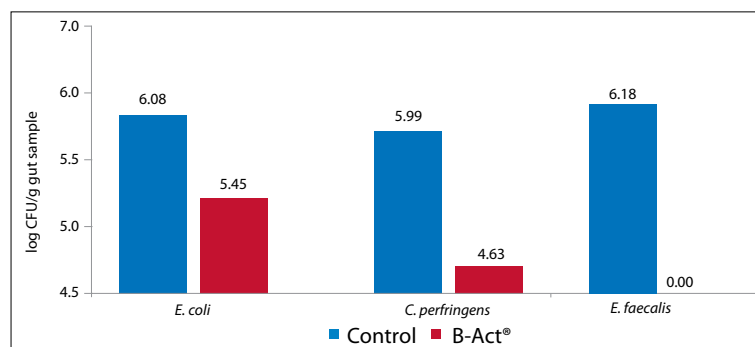
B-Act® is a probiotic feed additive containing viable spores of *Bacillus licheniformis* (DSM 28710).

#### 3. Measured parameters

On day 57 ten caecal samples were taken and analysed for each group. Of each sample 1 g was added to 9 ml physiological saline solution, followed by vigorous vortexing for 20s and serial dilution. Then 100µl or 1ml was inoculated respectively on non-selective or selective media for *Clostridia*, *Enterobacteriaceae* and anaerobic species, with regards to their optimal culture conditions.

### Results

The effect of B-Act® supplementation on important pathogens in the microbiota was in line with expectations, even though the control had already received probiotic supplementation earlier. Pathogens such as *Escherichia coli*, *Clostridium perfringens* and *Enterococcus faecalis* were reduced strongly, with the latter being restricted completely in the B-Act® group. Expressed in log<sub>10</sub> CFU/g caecal sample, *E. coli* decreased from 6.08 to 5.45, *C. perfringens* from 5.99 to 4.63 and *E. faecalis* from 6.18 to 0.



### Conclusion

Supplementing turkeys with 0.5 kg/mton B-Act® in commercial conditions had a positive effect on the animals' microbiota, with important pathogens such as *E. coli*, *C. perfringens* and *E. faecalis* being reduced strongly. This leads to a better health status of the animals, thus supporting optimal production.