Feeding a microencapsulated blend of organic acids and natural identical flavours improves growth performance in broilers in a necrotic enteritis model

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Nine-hundred and sixty ROSS 308 broilers were allocated in 32 pens divided into 4 experimental groups (d0): the control diet (CTR), the control diet added with Zinc Bacitracin at 55 ppm (AB), and the control diet added with Galliacid®, a microencapsulated blend of organic acids and natural identical flavours (EP 1,391,155 B1; Vetagro, Italy), at 300 and 600 ppm (GAL300, and GAL600, respectively). Birds were fed a wheat-based diet without coccidiostat and at d9 were inoculated with live vaccinal Eimeria oocysts; at d15 animals were infected with Clostridium perfringens for three days. Performance of animals was calculated during the intervals 0-8d, 8-15d, 15-22d, 22-28d, and 28-38d, and mortality was registered. Data were analysed with 1-way ANOVA and mortality with chi-square test. Compared to control, feed intake (FI), average daily gain (ADG), and body weight (BW) were improved in both Galliacid®S fed groups, especially at 8-15d (FI:+8.5% and +18.5% for GAL300 and GAL600, respectively, p<0.001; ADG: + 8.7%, and +11% for GAL300 and GAL600, respectively, p<0.001; BW d15: +10%, and +13% for GAL300 and GAL600, respectively, p<0.001). Mortality was not different among treatments. Galliacid®S improved growth performance in a NE challenge model when compared to a negative control diet and to an antibiotic growth promoter.