A microencapsulated blend of organic acids and natural identical flavours reduces necrotic enteritis-associated damages in broiler chickens


Six-hundred ROSS 308 broilers were allocated in 24 pens divided into 3 experimental groups (d0): the control diet (CTR), the control diet added with Galliacid®S at 300 ppm (GAL S), a microencapsulated blend of organic acids and natural identical flavours (EU patent 1391155B1; Vetagro srl, Italy), and the control diet added with a different blend of organic acids (WSB) added at 300 ppm. 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. Mortality was registered and dead animals were analysed for necrotic enteritis (NE) lesions; growth performance of animals was calculated and analysed with 1-way ANOVA, whereas mortality analysis was run with chi-square test. At d21, following challenge, mortality was significantly reduced in the GAL S group (GAL S: 21.8%; CTR 37.4%; WSB: 43.6%; P<0.001). Feed conversion during the challenge period (15-21d) was significantly lower for GAL S than the other groups (GAL S: 2.4; CTR: 3.2; WSB: 4.7. P<0.05). Galliacid®S allowed to improve growth performance in a NE challenge model when compared to a negative control diet and to a wider spectrum blend of organic acids.