

Effect of Microencapsulated Butyric Acid Supplementation on Growth Performance, Ileal Digestibility of Protein, Gut Health and Immunity in Broilers

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Abstract : A study was conducted to investigate the effect of different levels of microencapsulated butyric (MEB) on growth performance, gut health and immunity in commercial broiler chickens. In total, 336 day-old Hubbard classic broilers chicks were randomly assigned to 4 dietary treatments (Control, 0.25, 0.35 and 0.45g/kg of butyric acid) under completely randomized design. Each treatment was replicated 3 times with 28 birds in each replicate. Feed intake, body weight gain, feed conversion ratio, intestinal morphology, apparent ileal digestibility of protein and immunity parameters were evaluated. At the end of the experiment (35-d) 3 birds/replicate in each group were randomly selected and slaughtered to collect blood, duodenal samples and ileal digesta. The data were analyzed by using ANOVA technique. The results indicated improved body weight gain ($P = 0.0222$), feed conversion ratio ($P = 0.0056$), duodenal villus height ($P = 0.0512$), AID ($P = 0.0098$) antibody titer against Newcastle disease improved ($P = 0.0326$). Treatments remained unresponsive with respect to feed intake ($P = 0.9685$).

Keywords : butyric acid, broilers, gut health, ileal digestibility

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