Effect of replacing corn by barley and additives on digestibility and carcass components in broilers

Soraya Ayatollahi[1] ،Reza Majidzadeh Heravi[2] ،Hadi Kheirabadi[3] ،Mehdi Mehrabadi[4] ،Seyed Mohsen Hoseini[5]

1- Graduated student, Poultry Nutrition, Faculty of Agriculture, Ferdowsi University of Mashhad
2- Associated-professor, animal Nutrition, Faculty of Agriculture, Ferdowsi University of Mashhad
3- Graduated student, animal Nutrition, Faculty of Agriculture, Ferdowsi University of Mashhad
4- PhD student, animal Nutrition, Faculty of Agriculture, Ferdowsi University of Mashhad
5- PhD student, animal Nutrition, Faculty of Agriculture, Ferdowsi University of Mashhad

Abstract

This experiment was conducted to determine the effects of replacing corn by 20% barley with probiotic, prebiotic and antibiotic on carcass components and nutrient apparent ileal digestibility. Four hundred one day-old broiler chicks were assigned randomly to 5 dietary treatment and were tested for 42 days in a complete randomize design. Six replicates were allotted to each treatment. Experimental treatments were included: 1) corn diet had been replaced with 20% barley (referred to as barley control diet) 2) Barley control diet plus 0.25 g/kg probiotic GalliPro 3) Barley control diet plus 1 g/kg prebiotic Fermacto 4) Barley control diet plus 15 ppm antibiotic Virginiamycin and 5) Corn and soybean-based diet (referred to as corn control diet). Relatives of carcass, breast, tight, liver and abdominal fat weight to live body mass and intestinal length and also nutrient's apparent ileal digestibility were measured at 42 d of age. Result indicated that, carcass components were not affected significantly by treatment, but in all cases applying feed additives improved these factors. There was no significant difference in nutrient apparent ileal digestibility between corn based diet and barley treatments. Results indicated that feeding barley diets with this additives can be a good alternative for corn-based diet.

Keywords: Barley, Nutrient digestibility, Feed Additives, Broiler, carcass components