

The Pellet Quality and Broilers Performance With Different Levels of Fat and Different Types of Pellets Binders

Authors : Reza Vakili, Hassan Rostami rahvard

Abstract : To assess the effect of different levels of soybean oil (SO: 1, 2%) and different types of pellet binders (sodium bentonite (SB), calcium lignosulfonate (Ca-Ls), and plant compounds (PC) on the pellet quality, and broilers' performance, 480 one-day-old male broiler chickens (Ross 308) were used. Treatments included 1) 1% SO+1% SB (1-SB), 2) 1% SO+0.5 % Ca-Ls (1- Ca-Ls), 3) 1% SO+0.5% PC (1-PC), 4) 1% SO+ no pellet binder (1-None), 5) 2% SO+1% SB (2-SB), 6) 2% SO+0.5% Ca-Ls (2-Ca-Ls), 7) 2% SO+0.5% PC (2-PC), 8) 2% SO+ no pellet binder (2-None). The results showed that in the starter diet, the 1-PC group had the highest pellet durability index (PDI) ($P<0.05$). The PDI of the grower diet containing SB and PC was higher than others ($P<0.05$). The highest pellet hardness was observed in groups 1-SB, 1-PC, 2-SB, and 2-PC for the starter diet ($P<0.05$). For the finisher diet, the hardness of pellets containing SB and PC was higher ($P<0.05$). During the starter phase, the best feed conversion ratio (FCR) was obtained in 1-SB ($P<0.05$). The lowest and highest daily feed intake was observed in groups 2-PC and 1-SB, respectively, during the finisher phase. During the finisher and whole phases, the most daily body weight gain was observed in the SB group ($P<0.05$).

Keywords : bentonite, feed processing, pellet durability, soybean oil

Conference Title : ICADS 2025 : International Conference on Animal and Dairy Sciences

Conference Location : Berlin, Germany

Conference Dates : May 20-21, 2025