

Response of Broiler Chickens Fed Pelleted or Non-Pelleted Diets, Containing Graded Levels of Raw Full-Fat Soybean

Authors : G. Berhane, F. Kebede

Abstract : A feeding trial was conducted to enhance the utilization of locally produced full-fat soybean by the broiler industry. The study had three phases such as starter (1-14d), grower (15-28d), and finisher (29-49d) phases. A completely randomized design (CRD) was used in the starter phase with three treatments (commercial soybean meal (SBM) was replaced by raw full-fat soybean (RFSB) at 0, 10, or 20%), and each was replicated eight times. A total of 408 unsexed one-day-old Cobb-500 broiler chicks were randomly allocated to replicates. A 2 x 3 factorial arrangement was used in both second (grower) and third (finisher) phase trials, which had six experimental diets. These six treatments were formed by dividing the original three diets (containing 0, 10, or 20% of RFSB into two and then by pelleting anyone from each respective group and leaving the other as mash. Every treatment had four replications and 17 birds in each. Chemical compositions of feed ingredients were analyzed, and data on the initial body weight of chicks, feed offered, feed leftover, body weight (BW) of chickens, and mortality were collected. At the end of the experiment, two birds (one male and one female) per replicate were randomly selected and humanly slaughtered. Weights of dressed, eviscerated, cut parts of the carcass and visceral organs were weighed and recorded. Results indicated that feed intake (FI), body weight gain (BWG), BW, and feed conversion ratio (FCR) of broilers were not significantly affected ($P=0.05$) by supplementation of a leveled RFSB on diets at starter, grower, and finisher phases. The FI at the finisher stage was also significantly ($P=0.05$) influenced by the feed forms. However, weights of dressed, eviscerated, cut parts of the carcass and visceral organs were not significantly ($P=0.05$) affected by both RFSB supplementation, up to 20%, and feed forms. It is concluded that commercial SBM can be replaced by locally produced RFSB up to 20% without pelleting the diets.

Keywords : broilers, carcass characteristics, raw full-fat soybean, weight gain

Conference Title : ICSPPAD 2023 : International Conference on Sustainable Poultry Production and Animal Diseases

Conference Location : Vancouver, Canada

Conference Dates : May 22-23, 2023