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The effects of pellet in comparison with mash feed on the production index, intestinal morphology characteristics, index of ascites, quality and microbial count of litter in broiler chickens

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Abstract

This experiment was conducted with the aim of the effects of pellet and mash feed on the production index, intestinal morphology characteristics, index of ascites, quality and microbial count of litter in broiler chickens using three diets of pellet, mash, mash+pellet on broiler performance. This experiment was conducted in a completely randomized design with three treatments and four replicates during 42 days. The measured traits included production index, intestinal morphology traits, ascites, hematocrit percentage, litter moisture and nitrogen content and microbial count of litter. In the whole of the total period, the results showed that the highest production indexes were pellet and pellet+mash treatments. The results of the morphological traits of the intestine showed that pellet and pellet+mash treatments had the highest ratio of villus height to the crypt depth in jejunum and the lowest level of mash treatment was observed. The results showed that the high ratio of villus height to the crypt depth in jejunum resulting from the use of pellet and pellet+mash ration due to production index was improved. The consumption of mash and pellet+mash treatments in the first three weeks reduced ascites significantly and increased with the prolonged feeding period of the pellet diet. The pellet+mash and all-flour treatments had the lowest amount of moisture content and nitrogen content, and as a result, the microbial count of litter was lower than that of pellet treatment. The pellet+mash treatment had the lowest index of ascites (32.62%) and less hematocrit (36%). The final result was that the use of pellet+mash treatment had the highest production index and the most suitable litter quality and the lowest ascites and microbial count compared to the full pellet diet in broiler chickens.

Key words: Pellet and mash feed, Production, Intestine morphology, Ascites, Broiler

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