Microclimate, Body Weight Uniformity, Body Temperature, and Footpad Dermatitis in Broiler Chickens Reared in Commercial Poultry Houses in Hot and Humid Tropical Climates.

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ABSTRACT: The present study was conducted to investigate the variations of microclimate variables along the length of commercial broiler houses and to determine the associations between microclimate variables and animal variables in broiler chickens. A routine rearing program involving 480,000 broiler chickens was conducted in 24 commercial broiler houses (with dimensions of 14×120×2.5 m, yielding 1,680 m² of rearing area per house). Of these, 6,000 chickens were randomly selected for outcome measurements. Microclimate variables (Ambient Temperature (AT), Relative Humidity (RH), Air Velocity (AV), heat index, effective temperature, and ammonia) and animal variables (body weight uniformity, body temperature, and Footpad Dermatitis (FPD)) were measured at 10 sections (12 m apart) from the proximal end to distal end along the length of each broiler house. Regression analysis was used to determine the pattern of each microclimate variable along the length of the broiler houses and to determine the associations between the microclimate variables and the animal variables. The results showed that AT, heat index, and ammonia linearly increased from the front end to the rear end of the houses. In contrast, RH linearly decreased from the front end to the rear end of the houses. The regression analysis revealed no significant association between any of the microclimate variables and the body weight uniformity. Increasing AT and AV were associated with increasing mean body temperature. Increasing AT was associated with decreasing FPD. However, increasing RH and AV were associated with increasing FPD. In conclusion, the microclimate variables had various trends along the length of broiler houses.

Key words: Body weight uniformity, Broiler house, Footpad dermatitis, Microclimate
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In the present study, the effect of replacing clover hay with Peanut Vein Hay and dietary enzymes on performance, nutrient digestibility and carcass traits of growing New Zealand White Rabbits was examined. Seventy-two growing New Zealand White rabbits aged about 6 weeks were divided into six experimental treatments (12 rabbits per treatment). The experimental treatments were T1, control diet without Galzym; T2, control diet with Galzym; T3, 25% PVH without Galzym; T4, 25% PVH with Galzym; T5, 50% PVH without Galzym; T6, 50% PVH with Galzym. The obtained results revealed that final body weight, egg production, egg weight, yolk weight, yolk color index, eggshell weight, and carcass traits among the experimental groups. Dietary supplementation with the mixture of turmeric and cinnamon significantly improved feed conversion ratio. Quail weight at 42 days was not significantly different. While adding Galzym to rabbit diets had no effect on rabbit health.

The Effects of Supplementation of Cinnamon and Turmeric Powder Mixture in Ration of Quail on Performance and Quality of Eggs

Quail on Performance and Quality of Eggs.

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Antibiotic sensitivity, Egg, Layer poultry, Non-typhoidal Salmonellae (NTS) are substantial foodborne pathogens that lead to human infection with multiple-drug resistant Enterobacteriaceae spp. (3.2%), Salmonellae spp. (3.2%), Enterobacter spp. (3.2%), Staphylococcus spp. (3.2%), Clostridia spp. (3.2%), Enteropathogenic Escherichia coli (EPEC), Salmonella Typhimurium, Salmonella Enteritidis, Staphylococcus aureus, and Pseudomonas aeruginosa. These isolates were resistant to commonly used antibiotics such as tetracycline, chloramphenicol, cefotaxime, and erythromycin. The highest resistance was observed in Salmonella Typhimurium and Salmonella Enteritidis, with 92.9% and 90.9% resistance, respectively. Staphylococcus spp. showed 97.0% resistance to ampicillin and 82.9% resistance to clindamycin. Enterobacter spp. (38.5%) and streptococci (33.3%) were also resistant to multiple antibiotics. The study concluded that multidrug resistance is a significant problem in poultry, and appropriate antibiotic use and management strategies are needed to control the spread of multidrug-resistant bacteria.
Cross reference to the study by Eremenko and Rotmistrovskaya (2019) on the functional reserves of the testosterone synthesizing system in the blood of heifers in different breeds. The study indicated that black-and-white breeds at the age of 6 months had lower testosterone activity compared to Aberdeen-Angus and crossbred animals. The 6-month-old Holstein and Simmental cattle had lower testosterone activity than the compared group. The activity coefficients of the testosterone synthesizing system were lower in the group of black-and-white and Simmental heifers. The functional stress tests on the testosterone synthesizing system showed higher levels in Aberdeen-Angus heifers and crossbred animals. The results suggest the need for comparative analysis of the data obtained from different breeds.
Research on protein hydrolysate has been performed by using various types of enzymes, such as Alcalase, to obtain hydrolysates from Nile tilapia viscera. The study aimed to determine the amino acid profile and composition of these hydrolysates, which are expected to be used as a nutritional source.

**Chemical Characteristics and Amino Acids Profile of Protein Hydrolysates of Nile Tilapia (Oreochromis niloticus) Viscera. World Vet. J., 9(4): 324-328.**

The chemical characteristics of the Nile tilapia viscera and the amino acid profile of the resulting hydrolysates are summarized in the following table:

- **Protein content**: 57.81% ± 0.01 (dry basis)
- **Fat content**: 60.24 ± 0.04
- **Ash content**: 7.9

The hydrolysis process was conducted using Alcalase enzyme at a concentration of 1.5% (w/v), pH 7.9, and temperature of 55.80 °C for 1.5 h. Fresh Nile tilapia viscera had a high protein content of 7.9% ± 0.17 (dry basis). The results indicated that the hydrolysis of Nile tilapia viscera led to a significant reduction in moisture, fat, and ash content, as well as an increase in protein content.

The amino acid profile of the Nile tilapia protein hydrolysates indicated a high nutritional value which could be met adult human nutritional needs. The hydrolysates contain sufficient quantities of the essential amino acids that can be used as a nutritional source.

**References**