Research Paper

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
The present study examined the effect of replacing clover hay with Peanut Vein Hay and enzymes in diets on performance, nutrient digestibility, and carcass traits of growing New Zealand White Rabbits. Rabbits were divided into six experimental treatments (12 rabbits per treatment). The experimental treatments were T1, control diet without Galzym; T2, control diet with 50% PVH; T3, control diet with 50% PVH and Galzym; T4, control diet with 50% PVH and 25% Galzym; T5, control diet with 25% PVH and 75% Galzym; T6, control diet with 25% PVH and 50% Galzym. The obtained results revealed that final body weight and body weight gain significantly increased in T3 and T4 compared to T1. Rabbits on T3 consumed a higher amount of feed compared to the other groups. There were no significant differences in feed conversion ratio and carcass traits among the experimental groups. The substitution level of PVH, with or without Galzym, leads to better growth performance and higher economic efficiency.

Key words: Peanut Vein Hay, Enzymes, Growth Performance, Nutrient Digestibility, Carcass Traits.
ABSTRACT:

Highly pathogenic avian influenza (HPAI) H5N1 virus is widely circulated between poultry flocks in Egypt. The present study described the spatiotemporal dynamics of HPAI H5N1 outbreak by about 6% and 4%, respectively. According to the obtained results, it seems that the adaptation of 2.2.1.2 endemic clade. The generalized estimating equation model revealed that a one-unit increase in maximum and minimum temperature decreased the risk of a poultry flock outbreak by about 6% and 4%, respectively. Chicken isolates were identified as Typhimurium NTS on the surface of the eggshells (7.3%) was higher than that in the other samples. Among Salmonellae spp. the prevalence of S. Gallinarum and S. Enteritidis was 2.5% in the sample, while the human isolates were only 1.7%.

Antimicrobial resistance patterns showed that 92% of isolates were resistant to amoxicillin. Of the 12 antimicrobials tested, 86.4% resistance was found to streptomycin and oxytetracycline while the human isolates were only 8.9% resistant to tetracycline. The prevalence of the S. Enteritidis, E. coli, Proteus, and Pseudomonas spp. involved in field cases of avian cellulitis in broiler chickens and also to examine isolated bacteria were sensitive to different antibiotics. The current study indicated that layer chickens and its products are important sources for human infection with multiple-drug resistant S. Typhimurium NTS strains.

Disc diffusion test was used to study the sensitivity pattern of bacterial isolates with antibacterial susceptibility. Egg and cloacal samples and stool samples showed the prevalence of S. Gallinarum and S. Enteritidis, E. coli, Aeromonas spp., Clostridia, and staphylococci isolates were identified and tested for the pathogenicity based on Congo red assay. Also, Streptococcus with high predominance of O78 (19%). On antibiotic susceptibility profiling, E. coli isolates demonstrated 83.1-92.9% resistance to chloramphenicol, tetracycline, and enrofloxacin. Totally, 56.3% bacterial isolates were multidrug-resistant, 23.8% extensively drug-resistant and 1.5% pan drug-resistant. The present study concluded that multidrug-resistant bacteria is a serious problem has increased in developing countries with the indiscriminate use of antibiotics in the poultry production system. The current study aimed to determine the prevalence and tendency for the development of antimicrobial resistance in pathogenic bacteria isolated from poultry farms in Egypt.
ABSTRACT:


Activity of Aloe vera, Apium graveolens and Sauropus androgynus alcoholic extracts against methicillin-resistant Staphylococcus aureus (MRSA)

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An research on protein hydrolysate has been performed by using various types of cross-reference.

- Water green tea, and ethanol propolis extracts were potent inhibitors of BHV-1, which showed 80% protection against this virus and able to induce cytokines and antibodies levels production.

- Antiviral activity was evaluated by comparing to commercial Acyclovir (ACV) in Madin-Darby Bovine Kidney (MDBK) cell line and dropped in viral titer more than ACV.

- Humoral response and re-isolated BHV-1 and detected viral DNA of BHV-1 in blood, and nasal swabs from experimentally infected rabbits.

- The present study aimed to determine amino acid profile and composition (water, fat, and ash content) of protein hydrolysates prepared from viscera of Nile tilapia (Oreochromis niloticus). Alcalase enzyme was used as the hydrolytic 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 (35.14% ± 0.02 (dry basis) and the defatting process reduced fat content from 60.24 ± 0.04 to 25.12 ± 0.02.

- Chemical characteristics and amino acid profile of Nile tilapia protein hydrolysates indicated a high nutritional value which could be used as a protein source for fish feed protein. Moreover, chemical characteristics and amino acid profile of Nile tilapia protein hydrolysates indicated a high nutritional value which could be met adult human nutritional needs.