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 Impact of Climate Variability on Outbreak Occurrence in Some Governorates of Nile Delta, Egypt (Dakhlia, Qalyobia, Sharkia, Gharbia, and Menofia) where governorates, while Menofia governorate had the lowest one. From 2006 to 2009, the classic clade 2.2.1 was predominant and remained stable. It was demonstrated that new unreported NTS strains.

**Key words:** Epidemiology, Generalized estimating equation, Highly pathogenic avian influenza.

**Antibiotic sensitivity**

By using different cultural and biochemical methods. Moreover, *Salmonella* spp. isolates showed 100% resistant to tetracycline, enrofloxacin, and cefotaxime. Resistance to antibiotics like chloramphenicol, tetracycline, and enrofloxacin was high in poultry isolates.

**Prevalence of Multidrug Resistance Non-Typhoidal Salmonella spp.**

A total of 601 samples, including cloacal samples (150) eggshell (150), egg content (15), and stool samples (68) from pooled samples), layer hen carcasses (150), hand swab (68) and stool samples (68) from poultry workers, were collected from five layer chicken farms. Isolation of NTS was performed on bacteriological examination. E. coli was the most prevalent bacterial agent involved in cellulitis, particularly O78 serotype. In addition, *Enterobacter* spp. (60%), *Staphylococcus* (33.2%), *Clostridia* (5.4%), and *Streptococcus* (5.1%) were identified among the isolates. The study also demonstrated 83.1-92.9% resistance to chloramphenicol, tetracycline, and enrofloxacin. E. coli (38.9%), *Clostridium* (72.7%), *Pseudomonas mirabilis* (4.4%), and *Aeromonas* spp. showed 100% resistance to chloramphenicol and cefotaxime. *Salmonella* spp. isolates showed 100% resistant to tetracycline, enrofloxacin, and cefotaxime.

**Antibacterial susceptibility**

Kanamycin and gentamicin remained sensitive by 95.5% and 90.9%, respectively. Resistance to antibiotics like chloramphenicol, tetracycline, and enrofloxacin was high in poultry isolates. Following the vaccine pressure until 2010, resistant bacteria began to be frequent. The stability of PR from 2012 to 2014 could be attributed to the vaccine pressure until 2010. Moreover, this study explored the impact of climate variability in outbreaks occurrence using the statistical generalized estimating equation.
Staphylococcus aureus disease control programs and preventive measures should be immediately implemented in the region. The objective of this article was to investigate functional reserves of the testosterone synthesizing system in the blood of heifers in different breeds.


Chemical Characteristics and Amino Acids Profile of Protein Hydrolysates of Nile Tilapia (Oreochromis niloticus) Viscera.

**ABSTRACT:**

The present study aimed to determine amino acid profile and composition (water, ash, fat, protein, moisture) and amino acids content of Nile tilapia. The results indicated that the hydrolysis of Nile tilapia viscera led to an increase in the protein content (62.81% ± 0.18) (dry basis). Furthermore, hydrolysis process also decreased the moisture content (11.56% ± 0.49), fat content (16% ± 0.14), and ash content (5% ± 0.17) (dry basis). Glutamine had the highest amino acid level in hydrolysates content (5% ± 0.17) (dry basis). Alcalase enzyme was used as the hydrolytic enzyme at a concentration of 1.5% (w/v), pH 8.5, temperature of 50°C, and 24 h of hydrolysis. The hydrolysates contain sufficient quantities of the essential amino acids that can be used as a nutritional source for fish feed protein. Moreover, chemical characteristics and amino acid profile of Nile tilapia viscera indicated a high nutritional value which could be met adult human nutritional needs.

**Key words:** Protein hydrolysates, Tilapia, Viscera.