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.

Sohsuebngarm D, Kongpechr S and Sukon P.

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
ABSTRACT:

Coccidiosis is the most common protozoan disease in poultry and is often compared to the non-infected control group. The experimental model of coccidiosis in broiler chickens revealed that the number of oocysts excreted with feces is dependent on the dose of experimental group were daily collected from the days 6 to 12 after infection. Counting was recorded in poultry farms with the free-range system. The share of such poultry farms is constantly growing in Russia. The present study designed an experimental model of coccidiosis induced by Eimeria tenella and was kept isolated throughout the study. Chickens in groups 1, 2, 3, 4, 5 and 6 were orally infected with oocysts per gram of feces in broilers of the groups 1 to 6 was 4,080; 6,880; 1,780; 1,530; 662 oocysts/gram. Broilers were weighed at the beginning and at the end of the experiment. The groups infected with E. tenella and 94, respectively. The average daily weight gain in groups 1 to 4 was significantly lower than groups 5 and 6 (P < .05). Broilers were weighed at the beginning and at the end of the experiment. The groups infected with E. tenella and 94, respectively. The average daily weight gain in groups 1 to 4 was significantly lower than groups 5 and 6 (P < .05). The experimental diets and substitution levels of PVH significantly affected growth performance. The experimental diets and substitution levels of PVH significantly affected growth performance. The experimental diets and substitution levels of PVH significantly affected growth performance.

Key words: ABH 47, coccidiosis, broilers, E. tenella, Oocysts.

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**ABSTRACT**


One-unit increase in maximum and minimum temperature decreased the risk of a poultry outbreak sharply. The stability of prevalence rate (PR) from 2012 to 2014 could be attributed to the adaptation of clade 2.2.1 being predominant and remained stable. It was demonstrated that new unreported strains of HPAI H5N1 virus circulates and causes infection throughout the year, indicating changes in virus evolution and adaptation to the environment. The present study described the spatiotemporal dynamics of HPAI H5N1 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 outbreak sharply. The stability of prevalence rate from 2012 to 2014 could be attributed to the adaptation of clade 2.2.1 being predominant and remained stable. It was demonstrated that new unreported strains of HPAI H5N1 virus circulates and causes infection throughout the year, indicating changes in virus evolution and adaptation to the environment.

**Key words:**

- HPAI H5N1
- Climate variability
- Outbreak occurrence
- Nile Delta governorates
- Egypt

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The present study was carried out to isolate and identify the bacterial agents involved in field cases of avian cellulitis in broiler chickens and also to examine isolated bacteria against commonly used antibiotics. Therefore, it is recommended to use antibiotic sensitivity tests and accurate therapeutic doses to efficiently treat and control bacterial infections in poultry.

**Key words:**

- Bacterial isolates
- Broiler
- Cellulitis
- Sensitivity classes

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Identifying and quantifying the causes of condemnation of carcasses and organs from slaughtered animals in the Palestinian abattoir.

The objective of this study was to evaluate the causes of organ and carcass condemnation and the financial loss due to these condemnations. A slaughterhouse pathologist collected a total of 3,000 samples of organs and tissues from slaughtered animals during a 2-month period in 2019. The organs and tissues condemned during this period were lungs, livers, hearts, kidneys, and spleens. The financial loss due to the rejection of carcass and organs from the slaughtered animals during the study period was estimated to be 16356 USD. Both parasitic infestations and bacterial diseases were responsible for the highest economic losses, although other pathological lesions such as fatty change, incomplete bleeding, discoloration and tumors, were associated with some economic loss.

The emphasis should be placed on effective meat inspection, proper disposal of organ condemnations, and the implementation of disease control programs and preventive measures. The use of medical plants with anti-infective properties can also play a role in the prevention of diseases, as was demonstrated in a study by Vorobyov V, Vorobyov D, Polkovnichenko P and Safonov V. All the herbs were extracted and determined its antioxidant constituent and the extract with the highest antioxidant properties could be used as medicine to prevent the formation of bacterial resistance genes. This is particularly relevant in light of the increasing prevalence of antibiotic-resistant bacteria, such as Methicillin–Resistant Staphylococcus aureus (MRSA), which is becoming a more serious problem if it is resistant to methicillin. This phenomenon is known as Methicillin-Resistant Staphylococcus aureus (MRSA). In vitro research indicated that AV, AG and SA extracts and its combinations can utilize as the therapy against MRSA. Using disc diffusion and minimum inhibitory concentration (MIC) test. The data was analysed using one-way ANOVA and post hoc test. The result showed that AG extracts and its combinations could be used as the minimum dose to inhibit colonisation of MRSA.
Research on protein hydrolysate has been performed by using various types of PDF in bovine worldwide.

![Diagram of moisture, fat, ash, protein, non-essential amino acids, essential amino acids, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, cysteine, threonine, tryptophan, arginine, valine.]  


Acyclovir, BHV-1, ELISA, Green tea, Propolis, Lesions, Lung, Pneumonia, Stray cats


![Diagram of cellular immune response, detection of antiviral effect of green tea and propolis extracts against BHV-1]  

Figure 1: Histopathological changes in rabbit lung tissue. (A) Control (B) Propolis, green tea, (C) Propolis and green tea, (D) Acyclovir. (E) Mucosal edema (F) Mucosal hyperplasia (G) Hyperplastic bronchial glands (H) Malignant hyperplasia (J) Bronchitis (K) Interstitial pneumonia (L) Adenocarcinoma (M) Cystic bronchitis (N) Granulomatous pneumonia (O) Fibrinous peritonitis (P) Miliary granulomatous pneumonia (Q) Miliary caseous necrosis.

Figure 2: Histopathological changes in rabbit lung tissue. (A) Control (B) Propolis, green tea, (C) Propolis and green tea, (D) Acyclovir. (E) Mucosal edema (F) Mucosal hyperplasia (G) Hyperplastic bronchial glands (H) Malignant hyperplasia (J) Bronchitis (K) Interstitial pneumonia (L) Adenocarcinoma (M) Cystic bronchitis (N) Granulomatous pneumonia (O) Fibrinous peritonitis (P) Miliary granulomatous pneumonia (Q) Miliary caseous necrosis.

Figure 3: Anti-viral effect of green tea and propolis extracts against BHV-1.