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
ABSTRACT: "ABH 47" were divided into seven groups of six broilers each according to the principle of carried out using the McMaster technique. The average number of oocysts per gram of feces in broilers of the groups 1 to 6 was 4,080; 6,880; 1,780; 1,530; 662 and 94, respectively. The average daily weight gain in groups 1 to 4 was significantly lower compared to the non-infected control group. The experimental model of coccidiosis in broiler infected with E. tenella served as control. To determine the number of oocysts, all feces from the broilers of each 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 ca used Galzym; T3, 25% PVH without Galzym; T4, 25% PVH with Galzym; T5, 50% PVH without Galzym and T6, 50% PVH with Galzym. The obtained results revealed that final body weight, feed conversion ratio, egg production, egg weight, yolk weight, yolk color index, egg cholesterol level. In conclusion, feeding growing rabbits with 25% growth performance. The experimental diets and substitution levels of PVH significantly affected differences in feed conversion ratio and carcass traits among the experimental groups. The weight and body weight gain significantly increased in T3 and T4 compared to T1. Rabbits on efficiency without any adverse effect on rabbit health. Rabbits. PVH, with or without Galzym, leads to better growth performance and higher economic


Supplementation of turmeric and cinnamon mixture significantly reduced low-density lipoprotein white weight, eggshell weight, and egg cholesterol level. In addition, the percentage of quails inclusion of turmeric and cinnamon powder mixture (40 g + 40 g) / kg of feed can improve the levels and increased high-density lipoprotein in egg yolk. It is concluded that the dietary supplementation of the mixture of turmeric and cinnamon decreased feed intake and in broilers. Forty-two 14-days-old broilers of the cross culture at the doses of 2,000; 1,000; 250; 125; 62 and 15 oocysts/ml, respectively. Broilers of group 7 were uninfected and were kept isolated throughout the study. Chickens in groups 1, 2, 3, 4, 5 and 6 were orally induced by


Epidemiological Study on Highly Pathogenic Avian Influenza H5N1 Virus with Modeling of Climate Variability in Outbreak Occurrence Using the Statistical Generalized Estimating Equation Model

ABSTRACT:
Most cases were reported for the years 2006 to 2016. Moreover, this study explored the impact of climate variability in outbreaks occurrence using the statistical generalized estimating equation model. It was found that the governorates, while Menofia governorate had the lowest one. From 2006 to 2009, the classic clades had been evolved from classic clades after the vaccination pressure until 2010 resulted in the adaptation of 2.2.1.2 endemic clade. The generalized estimating equation model revealed that a climate index variable had a significant effect on the number of outbreaks.

The present study described the spatiotemporal dynamics of HPAI H5N1 virus circulates and causes infection throughout the year, indicating changes in virus adaptation of 2.2.1.2 endemic clade.

Epidemiology and temporal patterns.

DOI: https://dx.doi.org/10.36380/scil.2019.wvj36

Prevalence of Multidrug Resistance Non-Typhoidal Salmonellae Isolated from Layer Farms and Humans in Egypt.

ABSTRACT:
Salmonella [NTS] on the surface of the eggshells (7.3%) was higher than that in the other samples. Among NTS strains, S. Enteritidis, S. Typhimurium, S. S. Typhimurium identified as Salmonella NTS. This study indicated that layer chickens and its products are important sources for the development of multidrug-resistant human infection with multiple-drug resistant. S. Enteritidis, S. Typhimurium spp. at approximately similar rates of 4.7% and 4.4%, respectively. Chicken isolates were identified as S. Enteritidis, while the human isolates were only S. Typhimurium, S. Enteritidis. The prevalence of the 12 antimicrobials tested, 86.4% resistance was found to streptomycin and oxytetracycline by using different cultural and biochemical methods. Moreover, S. Enteritidis, S. Typhimurium Enterobacter spp. with high predominance of O78 (19%). On antibiotic susceptibility profiling, E. coli isolates showed high resistance to erythromycin. Totally, 56.3% bacterial isolates were multidrug-resistant, 23.8% sensitivity tests and accurate therapeutic doses to efficiently treat and control bacterial infections.

Aeromonas spp. (60%), Enterobacter (38.9%), E. coli (38.5%) and Clostridia (33.3%). Serological typing of E. coli identified nine O serotypes, O111 (65.8%), Staphylococci (62.2%), Enterobacteriaceae (38.5%) and streptococci (27.7%). The present study demonstrated high prevalence of multidrug-resistant bacteria among isolates, particularly O78 serotype. In addition, S. Enteritidis, S. Typhimurium is the most predominant pathogen involved in cellulitis, particularly against commonly used antibiotics. Therefore, it is recommended to use antibiotic treatment.

Aeromonas spp. isolates showed 100% resistant to tetracycline, enrofloxacin, and cefotaxime. Proteus mirabilis (4.4%), Staphylococci isolates showed high resistance to ampicillin (97.0%) and clindamycin (82.9%). Isolates of cloacal samples and stool samples showed the prevalence of Enteritidis. The prevalence of the Enterobacteriaceae spp. (60%), E. coli (59.8%), Clostridia (52.7%), while the human isolates were only S. Enteritidis. Pseudomonas aeruginosa (2.2%), and Staphylococcus aureus (2.2%) were isolated.

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The financial loss due to the rejection of carcass and organs from the slaughtered animals during the study period was estimated to be 16,356 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 examined during this period. The condemnations were registered during standard postmortem pathological examination done by the veterinarians at the slaughterhouse. The results of organ condemnation during the study period showed that seven whole carcasses, 77 whole offal, 208 livers, 692 lungs, 46 hearts, 273 kidneys, and 96 spleens were condemned during this period.

Economic losses associated with carcass and organ condemnations represent a significant financial burden and are related to the costs of animal health and disease control programs. Therefore, it is crucial to implement disease surveillance aimed at preventing or at least reducing the number of condemnations. One of the first steps in disease surveillance is at the slaughterhouse level, where the highest number of condemnations usually occur. This is because the carcass and organs are subjected to a thorough visual inspection by the veterinarians, and any abnormalities or lesions found are recorded and condemned.

The biogeochemical situation of terrestrial ecosystems of the Lower Volga region was studied to examine the distribution of trace elements in small ruminants. It was observed that the uptake of these elements from the environment was compensated by changes in hematological parameters. This suggests that the trace elements have a significant impact on the health and metabolism of the animals. The activity of Aloe vera, Apium graveolens and Sauropus androgynus alcoholic extracts against methicillin-resistant Staphylococcus aureus (MRSA) was evaluated. The results showed that the extracts had potential antimicrobial effects, which could be useful in the treatment of infections caused by MRSA. The data was analysed using one-way ANOVA and post hoc test. The result showed that Apium graveolens extracts had the highest antimicrobial effect.

To study the functional reserves of the testosterone synthesizing system, an experimental study was conducted on heifers of different breeds. The objective was to determine the functional reserves of the testosterone synthesizing system in different breeds. The results showed that the functional reserves of the testosterone synthesizing system were higher in cross-breed animals (Simmental × Aberdeen-Angus) compared to black-and-white Holstein and Simmental heifers. The level relative to the compared group of Aberdeen-Angus breed was in the black-and-white Holstein, Simmental, and Aberdeen-Angus heifers and their crossbred heifers (Simmental × Aberdeen-Angus). In order to determine the functional reserves of the testosterone synthesizing system, chorionic gonadotropin was intramuscularly administered at 6 months of age, and the activity of the testosterone synthesizing system was determined. The results of the effects of age and breed on the activity of the testosterone synthesizing system were analyzed statistically. The results showed that the functional reserves of the testosterone synthesizing system in cross-breed animals were higher compared to black-and-white and Simmental heifers. This phenomenon is known as crossbreeding advantage, which indicates that the combination of different breeds has a positive effect on the functional reserves of the testosterone synthesizing system.
An research on protein hydrolysate has been performed by using various types of...