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
Coccidiosis is the most common protozoan disease in poultry and is often induced by infections. Infected animals are usually treated with anti-coccidial drugs. Broilers were weighed at the beginning and at the end of the experiment. The groups were orally infected with Eimeria tenella oocysts per gram of feces in broilers of the groups 1 to 6 was 4,080; 6,880; 1,780; 1,530; 662; and 15 respectively. Broilers of group 7 were uninfected and 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 carried out using the McMaster technique. The average number of oocysts/gram of feces in broilers of the groups 1 to 6 was 4,080; 6,880; 1,780; 1,530; 662; and 15 respectively. Broilers of group 7 were uninfected and 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 carried out using the McMaster technique. The average number of oocysts/gram of feces in broilers of the groups 1 to 6 was 4,080; 6,880; 1,780; 1,530; 662; and 15 respectively.
The generalized estimating equation model revealed that a one-unit increase in maximum and minimum temperature decreased the risk of a poultry outbreak by about 6% and 4%, respectively. According to the obtained results, it seems that the impact of climate variability in outbreaks occurrence using the statistical generalized estimating equation model. The highest prevalence rate was recorded in Dakhlia and Qalyobia 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 clade. The prevalence of the virus circulates and causes infection throughout the year, indicating changes in virus adaptation of 2.2.1.2 endemic clade.

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

Presented by: T.N. Podleen, Nanitsch, AD Wijbrouck and TP Kheiminashgar


Table 1: Functional reserves of the testosterone synthesizing system in experimental heifers at the age of 6 months

<table>
<thead>
<tr>
<th>Breed</th>
<th>Testosterone Synthesizing Activity (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black-and-white Holstein</td>
<td>0.6 ± 0.2</td>
</tr>
<tr>
<td>Simmental</td>
<td>0.7 ± 0.3</td>
</tr>
<tr>
<td>Aberdeen-Angus</td>
<td>0.8 ± 0.1</td>
</tr>
<tr>
<td>Simmental × Aberdeen-Angus</td>
<td>0.9 ± 0.2</td>
</tr>
</tbody>
</table>

This study aimed to elucidate the chemical compounds, antioxidant activity and efficacy of Aloe vera, Apium graveolens and Sauropus androgynus alcoholic extracts against MRSA. Further exploration was conducted using scanning electron microscope (SEM) to analyse the SEM images of the herb extracts.

Key words: Aloe vera, Apium graveolens, Sauropus androgynus, alcoholic extracts, MRSA, antioxidant activity, efficacy, SEM images.

DOI: [Full text-](https://dx.doi.org/10.36380/scil.2019.wvj38)

Volume 9 : Issue 4, December 2019

References:

Research on protein hydrolysate has been performed by using various types of enzymes on visera of Nile tilapia (Oreochromis niloticus) Viscera. The hydrolysis of Nile tilapia visera led to an increase in the protein content (62.81% ± 0.18) (dry basis). Furthermore, hydrolysis process decreased the moisture content (11.56 % ± 0.49), fat content (16% ± 0.14), and ash (3.85 g/100g), whereas cysteine the lowest level (0.32 g/100g). In conclusion, Nile tilapia protein hydrolysates indicated a high nutritional value which could be met adult human nutritional needs.

ABSTRACT:


Detection of Lung Affections of Stray Cats in Mosul City, Iraq.

DOI: https://dx.doi.org/10.36380/scil.2019.wvj43

Mosul city, Lesions, Lung, Pneumonia, Stray cats

The present study was aimed to describe the pathological features of lung lesions in stray cats in Mosul city, Iraq. From February to March 2013, 19 ailing cats were caught through animal control campaigns and euthanized. Necropsy and histopathologic findings were recorded for the present study. All lungs collected from stray cats showed pathological lesions. The study concluded that all lungs collected from stray cats showed pathological affections.

Zawdar GSG, Abid El-Razik KhAE-H, Abdel-Shafy S, Farag TK and Mahmoud AH.

The Effects of Green Tea and Propolis Extracts on pro-inflammatory cytokines TNF-α, IL-1β, and Immunoglobulin Production in Experimentally Infected rabbits as a laboratory animal's model. The cytotoxicity assay was determined the safe dose (EPE) against BHV-1 virus comparing to commercial Acyclovir (ACV). The fifteen rabbits were divided accidentally into five groups. Group 5 was considered as control negative. Group 1 was inoculated with BHV-1 virus 107 TCID50/250 ul in nostrils without extracts or commercial drug. Group 2 was inoculated with BHV-1 virus 107 TCID50/250 ul in nostrils and received ACV. Group 3 was inoculated with BHV-1 virus 107 TCID50/250 ul in nostrils and received propolis ethanol, water green tea extracts and ACV. Group 4 was inoculated with BHV-1 virus 107 TCID50/250 ul in nostrils without extracts or commercial drug. Group 5 was considered as control negative. The study showed water green tea, and ethanol propolis extracts able to prevent virus replication and reduced CPE in MDBK cell cultures infected with BHV-1. Group 4 dropped in viral titer more than ACV. In conclusion, propolis and green tea extracts were able to prevent virus replication and reduced CPE in MDBK cell cultures infected with BHV-1 and able to induce cytokines and antibodies levels production.

Zavwar SCG, Abid El-Razik KhAE-H, Abdel-Shafy S, Farag TK and Mahmoud AH.


Figure B: Immunohistochemical staining for TNF-α and IL-1β in the lung infected with BHV-1. A) Positive immunohistochemical staining for TNF-α (×100). B) Positive immunohistochemical staining for IL-1β (×100). C) Negative control (×100).

Figure C: ELISA of TNF-α and IL-1β in the lung infected with BHV-1. A) TNF-α (×100). B) IL-1β (×100).