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ABSTRACT: The poultry industry is considered an important sector that meets the great demand for protein sources all over the world. Now, quails are recognized as promising and important alternative species with many advantages over other poultry species. In many countries around the world, quail meat has achieved great popularity as a good source of protein and other important nutrients. However, there are some limitations and challenges to quails production. One of them is the susceptibility to some viral, bacterial, mycotic and parasitic diseases that can adversely affect quails. Many of the diseases that affect quails cause severe economic losses in quail industry due to a decrease in growth performance, poor feed conversion, reduction in hatchability, increased mortality and treatment costs. There are limited research and literature dealing with different disease and conditions affecting quails. Therefore, the aim of this work was to present a comprehensive review of the most important emerging diseases affecting quails worldwide.

Keywords: Bacteria, Virus, Mycosis, Myctoxicosis, Parasites, Quail
Safiullin RT, Safiullin RR and Kachanova EO.


DOI: https://dx.doi.org/10.36380/jwpr.2019.21

ABSTRACT: Favorable conditions for development, reproduction, and accumulation of large amounts of zoophilous flies in commercial poultry farms are caused by incomplete compliance with veterinary and sanitary rules for growing in cage facilities. The purpose of the study was to test a systematic insecticidal program for destroying flies’ populations using adulticide and larvicide drugs in poultry farms under battery cage management. The number of imago flies in hen houses was dynamically evaluated using flypapers, six flypapers in each hen house, situated in different levels above the floor. Flynpapers were removed and the number of stuck insects was counted. The number of larvae was evaluated in dynamics by specimen testing from the floor area 10x10 cm, with weight of 3-5 g. The Quick Bayt WG 10% was applied to destroy the imago of flies. Baycidal® WP 25% was used against larvae of flies. Complex insecticide program Quick Bayt WG 10% + Baycidal® WP 25% provided the opportunity to destroy flies, with a significant difference in intensefficacy, (98.3 % for adult flies and 99.8 % for larvae). Furthermore, this program had a positive impact on economic indicators of meat production of broilers. The present study demonstrated high preventive efficacy and economical efficacy of complex program against flies under battery cage broiler management.

Keywords: Adulticide, Economical Efficacy, Fly Larvae, Intensefficacy, Larvicide, Zoophilous Flies

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Aspergillus fumigatus, Feed additive, Immunocompetence, Newcastle Disease Virus in broiler chickens of 10 days old were experimentally infected by feeding on feed contaminated with Aspergillus fumigatus. The antibody immune response against NDV significantly reduced in birds infected with Aspergillus fumigatus. Aspergillosis and aflatoxins suppress immune responses that may facilitate the infection of broilers with other microbial infections, leading to considerable economic losses in the poultry industry.

Table 1: Comparison of hematological and serum biochemical parameters of broiler chickens

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Red Blood Cells</th>
<th>White Blood Cells</th>
<th>Triglyceride</th>
<th>HDL</th>
<th>LDL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control (t1)</td>
<td>1.15 ± 0.05</td>
<td>10.95 ± 0.5</td>
<td>94.50 ± 2.5</td>
<td>36.50 ± 0.5</td>
<td>20.50 ± 1.5</td>
</tr>
<tr>
<td>MOLM at 1000 ppm (t2)</td>
<td>1.20 ± 0.06</td>
<td>11.00 ± 0.6</td>
<td>95.00 ± 2.5</td>
<td>37.00 ± 0.6</td>
<td>21.00 ± 1.6</td>
</tr>
<tr>
<td>MOLM at 1000 ppm + Grits (t3)</td>
<td>1.22 ± 0.07</td>
<td>11.05 ± 0.65</td>
<td>95.50 ± 2.6</td>
<td>37.50 ± 0.7</td>
<td>21.50 ± 1.7</td>
</tr>
<tr>
<td>GKSM at 1000 ppm (t4)</td>
<td>1.25 ± 0.08</td>
<td>11.10 ± 0.7</td>
<td>96.00 ± 2.7</td>
<td>38.00 ± 0.8</td>
<td>22.00 ± 1.8</td>
</tr>
<tr>
<td>GKSM at 1000 ppm + Grits (t5)</td>
<td>1.27 ± 0.09</td>
<td>11.15 ± 0.75</td>
<td>96.50 ± 2.8</td>
<td>38.50 ± 0.9</td>
<td>22.50 ± 1.9</td>
</tr>
<tr>
<td>GKSM at 1000 ppm + Grits (t6)</td>
<td>1.30 ± 0.10</td>
<td>11.20 ± 0.8</td>
<td>97.00 ± 2.9</td>
<td>39.00 ± 1.0</td>
<td>23.00 ± 2.0</td>
</tr>
</tbody>
</table>

It can be concluded that diet supplemented with GKSM at 1000 ppm, reduced triglyceride and low-density lipoprotein levels in serum of broiler chickens.
ABSTRACT: The gastrointestinal microbiota plays a significant role in the growth and health of poultry. Probiotics, which are live microorganisms, have been used to maintain the gut microflora's composition and protect against pathogen colonization. This review summarizes the importance of probiotics in poultry production and their role in gut microflora maintenance. The study also discusses the potential of probiotics in the poultry industry as a method to manage disease and improve productivity.

Keywords: Probiotics, Gastrointestinal microbiota, Poultry production, Enzyme activity, Fermented Palm Kernel Cake (FPKC)

The Effect of Bacillus subtilis Inoculum Doses and Fermentation Time on Enzyme Activity of Fermented Palm Kernel Cake (FPKC)

In a study conducted in Egypt, the effect of Bacillus subtilis inoculum doses and fermentation time on enzyme activity was investigated. The study was conducted using a factorial design with three levels of inoculum doses and three levels of fermentation times. The results showed that there was a significant interaction between inoculum doses and fermentation times. The highest mannanase activity was obtained with 7% inoculum doses and 6 days of fermentation. Similarly, the highest protease activity was obtained with 5% inoculum doses and 4 days of fermentation. The highest cellulase activity was obtained with 3% inoculum doses and 2 days of fermentation.

ABSTRACT: The effect of using solar energy and different ventilation rates on production in poultry houses was investigated in this study. The study was conducted in four poultry houses with different heating systems (solar and conventional) and ventilation rates of 2 kg every 2 minutes, 2 kg every 4 minutes, and 1.8 kg every 4 minutes. The results showed that productivity increased with increasing ventilation rates in houses with solar energy as a heating system. However, productivity decreased in houses with a conventional heating system.

Keywords: Energy balance, Poultry production, Solar heating system, Ventilation

Gastrointestinal microbiota, Poultry, Probiotics

Poultry production is presently the most effective animal production industry and provides an excellent source of protein production worldwide. The poultry gastrointestinal microbiota includes commensal, mutualistic, and pathogenic microbes. The relationship between the host and gut microbiota can affect the balance of mutualism and pathogenicity. The imbalanced gut microflora caused by the incidence of disease, hygiene conditions, diet, management practices, and environmental stress affects the survival and productivity of chicken. With the emergence of antibiotic-resistant bacteria, other alternatives are being sought. Supplementation with probiotics as feed additives is considered to enhance chicken productivity and to protect the host from disease.

ABSTRACT: Palm kernel cake (PKC) was by-product of the palm oil industry and had potential to be one of the poultry ration ingredients. However, its utilization for poultry was still limited because of the high concentration of β-mannan, which inhibits the growth of microorganisms. In order to increase PKC utilization in poultry ration, fermentation was conducted to remodel β-mannan by using Bacillus subtilis as an inoculum. The effect of Bacillus subtilis inoculum doses and fermentation time on enzyme activity was investigated in this study. The study was conducted using a factorial design with three levels of inoculum doses and three levels of fermentation times. The results showed that there was a significant interaction between inoculum doses and fermentation times. The highest mannanase activity was obtained with 7% inoculum doses and 6 days of fermentation. Similarly, the highest protease activity was obtained with 5% inoculum doses and 4 days of fermentation. The highest cellulase activity was obtained with 3% inoculum doses and 2 days of fermentation.

Keywords: Palm kernel cake, Bacillus subtilis, Inoculum doses, Fermentation time, Enzyme activity, Remodeling β-mannan
The Effects of Mospilan and Actara Insecticides in the Feed on Egg Production and Meat Quality of Laying Hens.

Dukhnytskyi V, Bazaka G, Sokolyuk V, Boiko P and Ligomina I.

Toxicology of the National University of Life and Environmental Sciences of Ukraine in 2015.

ABSTRACT:

Experiments were performed on five groups each consisting of seven chickens. The age of chickens at the beginning of the experiment was 150 days. The birds were fed the granulated compound feed. In M1 and M2 groups, Mospilan at doses of 65 mg/kg and 32.5 mg/kg of body weight were added to the feed, respectively. In A1 and A2 groups, Actara at doses of 360 mg/kg and 180 mg/kg of body weight were added to the feed, respectively. In A1 and A2 groups, Actara at doses of 360 mg/kg and 180 mg/kg of body weight were added to the feed, respectively.

The experiments were conducted in the laboratory of the Department of Pharmacology and Toxicology of the National University of Life and Environmental Sciences of Ukraine in 2015.

Keywords:

Chicken meat quality, Egg productivity, Insecticides Mospilan and Actara, Laying hens, Neonicotinoids, Experimental groups was low toxic.

Extracts from chicken meat of the experimental groups caused pathological changes, inhibition of movements and death of 13-16% of Tetrahymena pyriformis infusoria. This study demonstrated that the presence of Mospilan and Aktara in feed caused pathological changes, inhibition of movements and death of 13-16% of Tetrahymena pyriformis infusoria.

Chickens of the control group were fed without the addition of insecticides to the feed. The feeding period lasted 30 days and finally, egg production performance, meat quality, and gross weights of internal organs decreased by 23-36% in experimental groups. In the experimental groups, the pH of meat decreased at day 4 post-slaughter, and the meat broth with the addition of 5% copper sulfate solution was slightly cloudy with flakes. The meat of birds from the experimental groups reduced the egg production rate, caused chronic poisoning, changed biochemical processes in the lungs, and the liver was dark cherry in color with hemorrhage. In addition, the relative pathological changes were evaluated.

Egg production rate in M1 and M2 groups in comparison to the control group decreased by 78.4 and 29.7%, respectively. Egg production rate in A1 and A2 groups reduced by 89.2% and 48.7% compared to the control group, respectively.

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