The Effect of In Ovo Exposition to Ethanol Upon Osteogenesis of the Chicken Embryo.

Boussouar H, Khenenou T, Bennoune O and Berghiche A.


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Excessive alcohol consumption by a pregnant woman may delay foetal development and may cause malformations. In this study, the model of the chicken embryo to demonstrate the teratogenic effect of ethanol (33%) on the chicken osteogenesis on the 10th day of embryonic development have been used. 49 fertilized eggs were used in present investigation. Hence, different doses of ethanol were injected into the chicken embryos at 33% (20, 40, 80μl) in the air space at gastrulation and, on the other hand, an equivalent amount of the mentioned doses of distilled water were injected into the control-group eggs which was done once in every two days in order to maintain a high concentration in the blood. Experiments were repeatedly and independently carried out for three times. The eggs were incubated in a humid incubator at the temperature of 37.7 °C and at 60-65% of humidity. On the 10th day of incubation, the embryos were taken out and fixed in formalin at 10%. After that, the eggs were sectioned at 5μm of thickness with a Leica micrtome and, then, stained with the Hematoxylin and eosin. Histological examination has revealed that the exposition of chicken embryos to ethanol (33%) delays the skeletal development in a dose-dependent manner by reducing the length of the cartilaginous proliferation zone and hypertrophic zone during the bone formation period. Furthermore, under the effect of ethanol, the cell proliferation activities were repressed. In conclusion, present results indicated that using ethanol to treat chicken embryos at early stages caused considerable malformations and a decreased in the embryo survival rate. The exposition to alcohol affects the chicken osteogenesis in a dose-dependent manner.

**Keywords:** Chicken embryo, Ethanol, Malformations, Osteogenesis, Teratogenic effect
Aflatoxin induces stress and increases mortality rate during infection in poultry, especially broiler chickens. The objectives of this study were to observe the pathological effects due to aflatoxicosis in broiler chickens. A total of 120 chickens were divided into four groups, group A fed with a basal diet without aflatoxin contamination, group B with aflatoxin (> 1 ppb ≤ 5 ppb), group C with aflatoxin (5 ppb < ≤ 10 ppb), and group D with aflatoxin (10 ppb < ≤ 15 ppb). The results showed that the mortality rate was significantly higher in the aflatoxin-fed groups compared to the control group. The histological examination revealed liver and kidney damages in the aflatoxin-fed groups. The study concluded that aflatoxin has a significant negative impact on the health of broiler chickens.
Microalgae Biomass Application in Commercial Broilers Nutrition and Their Efficacy against Challenge with Epidemic Newcastle Disease Virus in Egypt. A Research Paper

The present study aimed to evaluate the effect of microalgae biomass as a feed additive on the performance and immune response of commercial broilers. One hundred and twenty broiler chicks were divided into six groups of 20 birds each. Three groups were fed on balanced broiler rations supplied with 1%, 5%, or 10% weight per weight (W/W) of microalgae biomass, while the other three groups were fed on free microalgae biomass balanced rations with the same vaccination schemes of live attenuated and inactivated Newcastle Disease Virus (NDV) vaccines.

In conclusion, dried microalgal biomass harvested from high-rate algal ponds (HRAP) can be used in broiler rations with no deleterious effect on growth rate, weight gain, poultry viability, and immune response. Using microalgae collected from HRAP as a feed additive to broiler rations was studied. One hundred and twenty broiler chicks were divided into six groups of 20 birds, three of them have fed on balanced broiler rations supplied with 1% weight per weight (W/W) of microalgae biomass and have variable vaccination schemes of live attenuated and inactivated NDV vaccines as well as similar susceptible groups.

The results showed that the microalgae have no hazard effect on growth rate, weight gain, poultry viability, and immune response. In conclusion, microalgae can be used in broiler rations with no deleterious effect on growth rate, weight gain, poultry viability, and immune response. Using microalgae collected from HRAP as a feed additive to broiler rations was studied. One hundred and twenty broiler chicks were divided into six groups of 20 birds, three of them have fed on balanced broiler rations supplied with 1% weight per weight (W/W) of microalgae biomass and have variable vaccination schemes of live attenuated and inactivated NDV vaccines as well as similar susceptible groups.

Furthermore, future studies should be applied with increasing microalgae percent in poultry feed with the same vaccination treatment. Furthermore, weight gain, antibody response, mortalities, and immune response were measured. In addition, the other three groups have fed on free microalgae biomass balanced rations with the same vaccination treatment.

Keywords: Microalgae, Feed additive, Newcastle Disease Virus, Broiler production.

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Evaluation of Dietary Medicinal Plants and algae in Laying Japanese Quails. A Research Paper

The study aimed to evaluate the effects of medicinal plants and algae on egg production, egg quality, and biochemical parameters in laying Japanese quails. A total of 675 (49 days old) Japanese quail birds were randomly distributed into nine groups with three replicates of 25 birds in each. Results showed that the medicinal plants had a significant effect on weekly egg production, egg quality, and biochemical parameters.

Dietary medicinal plant type and dosage showed a significant difference in weekly egg production and egg quality characteristics. Moreover, the birds fed diet supplemented with G. pulvinata showed better weekly egg production than the control group. Furthermore, the birds fed diet supplemented with R. coriaria showed that egg weight, shell weight, albumen weight, and shell thickness were not influenced by treatments. The effects of medicinal plants on weekly egg production differed depending on the dietary medicinal plant type and dosage. Furthermore, the birds fed diet supplemented with R. coriaria at 20 g/kg increased yolk weight. Furthermore, greater albumen protein and thiobarbituric acid (TBAd) content of the tenth day's eggs were observed.

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The results indicated that the accuracy of the detection technique is variable under different procedures. It is concluded that residue detection requires a high-precision qualitative analysis with stringent selection criteria of data. The databases were searched for quantitative inputs from the available scientific publications using important keywords, in order to evaluate all studies about the detection of antibiotic residues in meat of broiler chickens in developing countries. A Meta-analysis on Antibiotic Residues in Meat of Broiler Chickens in Developing Countries.

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Preparation of Necrotic Enteritis Vaccine for Turkey.
El-Sergany E, Hamed E-H, El-Sawy H, Medhat T, Yasser A and Alaa E-M.
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ABSTRACT
Clostridium perfringens is the most important cause of enteritis in domestic animals, in chicken and turkey it well known as pathogen responsible for necrotic enteritis; hepatitis, and cholecystitis. The disease in turkey characterize by either severe form with high rate of mortalities or subclinical form of reduce growth rate and increase condemnation rate. The major factor responsible for pathogenicity of Clostridium perfringens was alpha toxin. The aim of present study was to prepare of Clostridium perfringens alpha Toxoid vaccine for controlling the necrotic enteritis disease. The vaccine was prepared at different doses depend on lethality of toxin (24, 48 and 96 Minimum Lethal Dose) for controlling necrotic enteritis disease. Antibody titer elicited by vaccination was measured by toxin neutralization test, ELISA, and challenge test. It revealed that antibody titer expressed by international antitoxin unit per ml was 7.4, 4.1 and 1.26 respectively according to the mentioned dose, and also the protection percent against challenge was 100% when vaccinated with either 48 or 96 Minimum Lethal Dose, while it gave 80% when vaccinated with 24 Minimum Lethal Dose. It concluded that use of Clostridium perfringens alpha Toxoid with recommended dose of 48 MLD able to protect turkey for 6 months.

Keywords: Alpha toxin, Clostridium perfringens, Turkey, Type A, Vaccine