The Effect of \textit{In Ovo} Exposition to Ethanol Upon Osteogenesis of the Chicken Embryo.

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ABSTRACT

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
**Recent Update: Effects of Aflatoxin in Broiler Chickens.**

Kurniasih and Prakoso YA. (2019). Recent Update: Effects of Aflatoxin in Broiler Chickens. Aflatoxicosis in broiler chickens. A total of 120 chickens were divided into four groups, group A and no significant difference for abnormality and acrosome integrity. Therefore, it can be concluded that good quality semen samples can be collected from the vas deferens, and semen of Algerian local cocks can be preserved at 20°C for 24h.

**Effect of Different Bedding Materials on the Hematological and Serum Biochemistry of Broiler Chickens.**

The aim of the present study was to determine the effect of different bedding materials on the, hematological and serum biochemical parameters of the broiler chickens. A completely randomized design was employed for the research in which the treatment were five bedding materials, rice, hulls, groundnut hulls and sharp sand can serve appropriately as bedding materials for broiler production, with compatible effects on serum biochemical and hematological indices of broiler chickens.

**Effect of Feeding Baker’s Yeast Performance of Cobb 500 Broilers.**

Effects of feeding different levels of baker’s yeast were studied. Four nearly isocaloric and isonitrogenous starter and finisher rations were prepared. 240 chicks with an average initial body weight of 42g were randomly divided into 12 groups contained 4 treatments with 3 replications for each treatment. Treatment rations were containing 0, 0.5, 1.5 and 2.5% of baker’s yeast as T1, T2, T3 and T4 respectively. At the end of the trial, 3 males and 3 female were replicated three times each with ten birds in each experimental unit. The birds were housed in broilers cages with deep litter system without special lighting. The CP content of the rations during the starter and finisher phases were 22% and 20%, respectively. The ME content of the rations during the starter and finisher phases were 3100 kcal/kg and 3200 kcal/kg respectively. Feed intake during the starter phase and entire trial period. Feed conversion ratio of T4 and T3 groups was better than T2 and T1. T3 and T4 period was lower for T4, whereas during the finisher phase in control diet group showed the highest feed intake than the other supplemental groups. The highest daily body weight gain was followed by T4. Baker’s yeast can be an important feed additive, which can be included up to 2.5% of the total ration and improve the overall performance of broilers without compromising the hematological indices of broiler chickens.

**Crossref Metadata:**

- [Recent Update: Effects of Aflatoxin in Broiler Chickens](https://dx.doi.org/10.36380/jwpr.2019.8)
- [Effect of Different Bedding Materials on the Hematological and Serum Biochemistry of Broiler Chickens](https://dx.doi.org/10.36380/jwpr.2019.7)
- [Effect of Feeding Baker’s Yeast Performance of Cobb 500 Broilers](https://dx.doi.org/10.36380/jwpr.2019.6)

**Keywords:**

Aflatoxin, Antibody, Broiler, Haematology, Immunohistochemistry, Residue
Using microalgal biomass in animal diets has been studied recently.

Many species of cultivated microalgae 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.

Keywords: Immune response, Newcastle disease virus, Poultry feed.


Dietary inclusion of 0.5% and 2% of Rhus coriaria, G. pulvinata, and P. granatum peel to the diet lead to progress in egg production rate, enhanced the egg quality and egg weight. Using of microalgae collected from high-rate algal ponds (HRAP) as a feed additive to broilers ration was studied. One hundred and twenty broiler chicks were divided into 6 groups of 20 birds, three of them have fed on balanced broiler ration supplied with 1% weight per weight of microalgae biomass and have variable vaccination schemes of live attenuated and control. In addition, the other 3 groups have fed on free microalgae biomass balanced ration with the same vaccination treatment. Furthermore, weight gain, antibody response, mortalities, and protection rate and body weight gain. In conclusion, microalgae can be used in broiler rations and they are found effective in maintaining animal growth performance, and in improving body weight gain. Using of microalgae collected from high-rate algal ponds (HRAP) as a feed additive to broilers ration was studied. One hundred and twenty broiler chicks were divided into 6 groups of 20 birds, three of them have fed on balanced broiler ration supplied with 1% weight per weight of microalgae biomass and have variable vaccination schemes of live attenuated and control. In addition, the other 3 groups have fed on free microalgae biomass balanced ration with the same vaccination treatment. Furthermore, weight gain, antibody response, mortalities, and protection rate and body weight gain. In conclusion, microalgae can be used in broiler rations and they are found effective in maintaining animal growth performance, and in improving body weight gain.

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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