The Effect of *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.

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The objectives of this study was to observe the pathological effects due to aflatoxin contamination on broiler chickens. The birds were divided into two groups: group A fed with a basal diet without aflatoxin contamination, and group B with aflatoxin (> 1 ppb) contamination. The birds were brooded for two weeks before the experiment began. The blood samples were collected at day 1 and day 21 to examine the hematological and serum biochemical parameters.

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

James G, Garba DJ, Adeolu AS, Adamu Z and Mamma Z.

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A completely randomized design was employed for the research in which the treatment were five bedding materials (rice hulls, groundnut hulls, wood shaving, sharp sand and control). The treatments were replicated three times each with ten birds in each experimental unit. The birds were fed with a basal diet during the starter and finisher phases with ME content of the rations during the starter and finisher phases were 2800 kcal/kg and 2900 kcal/kg respectively. Feed intake during the starter phase and entire trial 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 recorded in broilers fed T4 rations during starter phase, finisher phase and entire experimental period.

**Effects of Feeding Different Levels of Baker's Yeast on Performance and Hematological Parameters of Broiler Chickens.**

James G, Garba DJ, Adeolu AS, Adamu Z and Mamma Z.

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Four nearly isocaloric and isonitrogenous starter and finisher rations were prepared. 240 chicks with an initial body weight of 56 g were used in the experiment. 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 broilers were selected from each replicate and the blood samples were collected to examine the hematological and serum biochemical parameters. The results showed that the feeding of baker's yeast as T1, T2, T3 and T4 respectively. The highest net income, marginal rate of return and chicks' sale to feed cost were obtained for T3 containing ration.

**Conservation, Eastern Algeria, Epididymis, Local cocks, Post-mortem, Vas deferens.**

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Chickens from the east of Algeria (age, 12-24 months, body weight 1.50-2.53 kg). And 18 pairs of adult local chicken cock's sperm, and the effects of conservation in situ at different temperatures (2h and 24h; 0°C and 4°C) on the post-mortem sperm were studied. The characterization of post-mortem sperm of local chicken cocks in Eastern Algeria was investigated. The post-mortem sperm retrieval techniques, the flushing and float-out methods in the collection of post-mortem sperm, obtained from epididymis and the vas deferens of 18 pairs of adult local chicken cocks were studied. The results showed that there was no significant difference for viability and motility of the spermatozoa recovered from vas deferens, and no significant difference for abnormality and acrosome integrity. Therefore, it can be suggested that rice, hulls, groundnut hulls and sharp sand can serve appropriately as bedding materials for broiler production, with compatible effects on serum biochemical and hematological parameters.
Furthermore, future studies should be applied with increasing microalgae percent in poultry feed. Alg. were found effective in maintaining animal growth performance, and in improving body weight. Using of microalgae collected from high rate algal ponds (HRAP) as a feed additive to inactivated Newcastle disease virus (NDV) vaccines genotype II or either non-vaccinated groups with the same vaccination treatment. Furthermore, weight gain, antibody response, mortalities, function and body weight, they have similar effect with the free microalgae groups in normal conclusion dried microalgal biomass harvested from HRAP can be used in broiler ration with no deleterious effect on growth rate, weight gain, poultry viability and immune response. In conclusion, microalgae can be used in broiler ration with no deleterious effect on growth rate, weight gain, poultry viability and immune response. In conclusion, microalgae can be used in broiler ration with no deleterious effect on growth rate, weight gain, poultry viability and immune response. In conclusion, microalgae can be used in broiler ration with no deleterious effect on growth rate, weight gain, poultry viability and immune response. In conclusion, microalgae can be used in broiler ration with no deleterious effect on growth rate, weight gain, poultry viability and immune response. In conclusion, microalgae can be used in broiler ration with no deleterious effect on growth rate, weight gain, poultry viability and immune response.
ABSTRACT

Clostridium perfringens is the most important cause of enteritis in domestic animals, in chicken and turkey it is well known as a pathogen responsible for necrotic enteritis, hepatitis, and cholecystitis. The disease in turkey is characterized by either severe form with a high rate of mortalities or a subclinical form with reduced growth rate and increased condemnation rate. The major factor responsible for pathogenicity of Clostridium perfringens was alpha toxin. The aim of the present study was to prepare a Clostridium perfringens alpha Toxoid vaccine for controlling the necrotic enteritis disease. The vaccine was prepared at different doses depending on the lethality of the 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 the antibody titer expressed as 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 the use of Clostridium perfringens alpha Toxoid with the recommended dose of 48 MLD was able to protect turkey for 6 months.

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