Effects of Diet Containing Fermented Canola Meal on Performance, Blood Parameters and Gut Health of Broiler Chickens.

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ABSTRACT: The current research aimed to study the effects of the fermented canola meal (Lactobacillus) diet on productive performance, blood parameters, and gut health of broiler chickens under high ambient temperature conditions. A total number of 320 (Ross-308) one-day-old broiler chickens were allocated randomly into four experimental groups for 42 days. Four experimental groups with four types of diet, including the control group (CON) received basal diet, and three other experimental groups were supplemented with 20% of the canola meal (CM), 20% fermented canola meal (FCM), and 20% canola meal with probiotic (PCM). The chickens that fed FCM presented improvement in live body weight, feed conversion ratio, and higher nutrient digestibility, compared to CM and PCM groups. Serum glucose, total protein, albumin, and aspartate aminotransferase (AST) of levels of chickens fed by FCM were higher than chickens fed CM and PCM, while there was a decrease in cholesterol. Fermented canola meal resulted in some noticeable beneficial changes in the cecum microflora communities through increasing the population of Lactobacillus spp. and decreasing the Escherichia coli and improved its morphology by increasing villus height. The results indicated that the fermentation of canola meal has enhanced performance, nutrient digestibility, and gut health, which allow using greater amounts of fermented canola meal as a replacement of soybeans meal in the broiler diet.

Keywords: Broiler, Canola meal, Fermentation, Gut health, Performance, Serum parameter.
ABSTRACT: Effects of Acetaminophen and Vitamin Supplement on Feed intake, Body Weight, and Acute Pain Responses of Pullets Subjected to Beak-trimming.


The first experiment aimed to compare the effects of manual and electric beak-trimming methods on feed intake, body weight, and biochemical parameters of eight-week-old pullets. A total of 20 pullets aged 3 weeks were assigned to two treatment groups; those in group A were manually debeaked while the samples in group B were electrobeaked. The chickens' beak trimmed with both methods experienced intense pain of varying degrees lasting up to 72 hours. In the second experiment, 40 eight-week-old pullets were assigned to four groups; group A was the control, group B was treated with a vitamin supplement, group C was treated with acetaminophen, and group D was treated with both acetaminophen and vitamin supplement. Findings indicated that 2 hours post-beak-trimming (PBT), the packed-cell volume of group A was significantly lower than that of group B at 2 and 6 hours PBT, while total plasma protein level of group A was significantly higher than that of group B at 2 and 6 hours PBT while total plasma protein level of group A was significantly lower than that of group B at 2 and 6 hours PBT. Furthermore, feed intake and body weight markedly decreased in the pullets debeaked with both methods until 72 hours PBT. Results revealed that 2 hours PBT, plasma cortisol level in groups B, C, and D were significantly lower than that of group A. Blood glucose was lowest in groups A and D at 6 and 24 hours PBT, respectively. It is concluded that the pre-treatment with vitamins and NSAIDs could reduce stress and pain in debeaked chickens.

Key words: Acetaminophen, Broiler chickens, Carcass yield, Meat quality.

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Clinicopathological Findings in Suspected Cases of Virus-induced Neoplastic Diseases in Commercial Layer Chickens in Nigeria.


Avian neoplastic diseases, including Marek's disease (MD), avian leukosis (AL), and reticuloendotheliosis (RE), are of economic importance in the chicken industry. However, it is difficult to differentiate MD from AL and RE by clinical signs and postmortem examination. Therefore, the present study aimed to classify the avian neoplastic diseases affecting commercial layer chickens in Kaduna and Plateau States, Nigeria, using clinical history, postmortem examination, and histopathological technique. Carcasses of commercial layer chickens from 7 and 20 poultry farms in Kaduna and Plateau States were studied, respectively, from February 2017 to March 2018. The age, morbidity, and mortality rates in each of the affected farms were determined. Detailed postmortem examinations were carried out on the carcasses from the affected farms, and organs observed to have neoplastic lesions were fixed in 10% neutral buffered formalin for histopathological examination. The neoplastic lesions were characterized by white to gray, multifocal, firm nodules of varying sizes on the affected organs. In Kaduna State, the neoplasms were commonly observed on the liver (85.7%), spleen (71.4%), heart (42.9%), and kidneys (42.9%), while in Plateau State, they were mainly observed on the liver (85.7%), spleen (71.4%), and kidneys (42.9%). The age, morbidity, and mortality rates of neoplasm in the affected chickens were 3.9% and 9.3% in Kaduna and Plateau States, respectively, while the affected layers were 3.9% and 9.3% in Kaduna and Plateau States, respectively. The histopathological changes in the affected tissues were similar and characterized predominantly by the infiltration of lymphocytes, lymphoblasts, and macrophages. The patterns of distribution of the pleomorphic neoplastic cells within the liver were multifocal and perivascular in most cases. Findings from the current study indicated that cases of neoplasms in affected layers were 3.9% and 9.3% in Kaduna and Plateau States, respectively, while the age, morbidity, and mortality rates of neoplasm in the affected chickens were 3.9% and 9.3% in Kaduna and Plateau States, respectively. Therefore, it is recommended that farmers in Nigeria should be trained on the clinical and histopathological aspects of avian neoplastic diseases to enable early detection and management of the diseases.
ABSTRACT:
Chicken production plays a major role in the livelihood of rural people due to the provision of eggs and meat which are high sources of protein. This calls for sustainable production of chickens through strategies aimed at improving the hatchability of eggs and survival of chickens. Therefore, the present study was conducted to determine the effect of egg storage length on egg hatchability and survival of the Koekoek chickens. A total number of 270 eggs were divided into three treatment groups, and the eggs of each group were stored for 3, 7, and 11 days before incubation. Each treatment consisted of three replicates. The General Linear Model procedure was used to analyze the data. The eggs that were stored for three days before incubation had a higher hatching percentage, compared to those that were stored for 7 and 11 days before incubation. Storing eggs for few days before incubation resulted in reduced embryonic mortality rate and lower mortality of chickens during the first seven days after hatching. Based on these results, it is recommended that Koekoek chicken eggs should be stored for three days before incubation to maximize hatchability and survival of chickens before the age of seven days.

Keywords: Eggs, Storage, Embryo mortality, Hatchability, Koekoek chicken.
Marek's disease (MD) is a lymphoproliferative and neuropathic disease of chicken.

Gold chickens (Arabic, 1.52 ng/ml), compared to P.

**ABSTRACT:**

Egg Production, Fertility, Hatchability, and Luteinizing Hormone Profile of Progesterone Hormone Injected to Arabic Gold Chicken (Gallus domesticus).

**Keywords:**

the farms surveyed, 9/30 (30.0%) in the Centre; 8/30 (26.7%) in the Littoral; and 13/30 (43.3%) in the West were aware of biosecurity measures. The biosecurity score (BS) of surveyed farms ranged between 2 and 3. The findings indicated that 39 farms (12 in the Centre, 14 in the Littoral, and 17 in the West) were at high risk. Reasons for keeping chickens and the number of treated chickens in the farms are presented in Table 1. The probability of disease outbreaks was significantly higher in the Centre (OR: 0.27-0.58) and South Gondar (OR: 0.19, 95% CI: 0.13-0.28) compared to North Gondar zone. In conclusion, the present study revealed a high flock and chicken seroprevalence level of MDV. In the present preliminary study, a high flock and chicken level of MDV was demonstrated, with an overall seroprevalence of 59.11%. The mixed-effect logistic regression model was used to assess the risk of outbreaks in the study areas.

**REFERENCES:**


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The current study aimed to evaluate whether the probiotic organism. There was weight gain in chicken groups, except for group B. There was a decrease in the total cell count in the infected group, and the group treated with antibiotic showed a significant decrease in the total cell count compared to the infected group. The treatment group showed a significant reduction in the total cell count compared to the control group. The microbial tests revealed a decrease in the total cell count in the treatment group compared to the infected group. The microbial tests also revealed a decrease in the total cell count in the treatment group compared to the infected group. The microbial tests showed a decrease in the total cell count in the treatment group compared to the infected group. The microbial tests revealed a decrease in the total cell count in the treatment group compared to the infected group. The microbial tests showed a decrease in the total cell count in the treatment group compared to the infected group.
The present study aimed to estimate carcass characteristics of pure and crossbred guinea fowl from three climatic zones (Sudanian, Sudano-Guinean, and Guinean) of Benin. Each guinea fowl was subjected to a direct phenotypic description, biometric measurements, and DNA analysis.

Out of 1320 (529 males and 791 females) adult (at least 24 weeks old) indigenous guinea fowls sampled from Benin, the results showed that the plumage coloration of indigenous guinea fowl in their biometric measurements (live weight, chest circumference, body length, drumstick length, and tail length) were significantly higher in males. The live weights of guinea fowl in the Sudanian zone (1.40 ± 0.18 kg) were higher than those of guinea fowl found in the Guinean zone (1.33 ± 0.28 kg).

Principal Component Analysis indicated that three distinct groups of guinea fowl can be formed based on their morphobiometric characteristics. The first group had higher values in all colour indicators, L* (lightness), a* (redness), and b* (yellowness). The second group was dominated by black (29.5%), and cinnamon (9.8%). The most common beak colors were grey (64.9%) and black-orange (21%).

The eyes were predominantly black-white (67.1%). Grey-orange (24.8%) were more represented on the shanks. The results of the present study might be useful for chicken farmers who are interested in weeds and other genetic groups.