Research Paper

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.
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 Nigeria using clinical history, postmortem examination, and histopathology.

The age means of the affected layers were 20.6 weeks and 20.8 weeks in Kaduna and Plateau States, respectively. The average morbidity rates of neoplasm in the affected 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 technique. Carcasses of commercial layer chickens from 7 and 20 poultry farms in Kaduna and Plateau States were studied, respectively.

Generally, 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 observed on the liver (75.7%), spleen (60.7%), heart (42.9%), and kidneys (42.9%). The histopathological changes in the affected tissues were similar and characterized predominantly by the infiltration of lymphocytes, lymphoblasts, and macrophages. The patterns on the liver (85.7%), spleen (71.4%), heart (42.9%), and kidneys (42.9%) were observed.

The average mortality rates were 8.6% and 8.5% in Kaduna and Plateau States, respectively. The average morbidity rates were 12.9% and 11.5% in Kaduna and Plateau States, respectively. The age means of the affected layers were 20.6 weeks and 20.8 weeks in Kaduna and Plateau States, respectively. 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 technique. Carcasses of commercial layer chickens from 7 and 20 poultry farms in Kaduna and Plateau States were studied, respectively.
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 poultry. The outbreak of diseases is the main factor affecting poultry production in the Northwest of Ethiopia. The implementation of biosecurity measures in poultry farms is essential to reduce the risk of disease outbreaks and provides good quality chicken products for human consumption.

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

Egg production and reproduction performance of chickens depend on their hormonal status, especially progesterone hormone, which has been known to correlate with egg production. In this study, 60 Arabic Gold chickens aged 26-weeks were divided into three groups based on injected hormone concentration (Pulse of 0.001 mg/chicken; P2 of 1 mg/chicken; P3): 1 mg/chicken. The production phase of Arabic Gold chicken had a significant effect on egg production and caused an increase in the P3 group reached its peak at week 26 (78.9%). In addition, it was found that the P3 group was able to reach its peak production (82.9%) at week 29, while the P1 group recovered to 70.9% (active) at week 30. The P2 group was able to reach its peak production (82.9%) at week 29, while the P1 group was able to reach its peak production (82.9%) at week 29, while the P1 group was able to reach its peak production (82.9%) at week 29.

The present study aimed to analyze the effect of progesterone hormone injection on egg production. The present study aimed to analyze the effect of progesterone hormone injection on egg production. The present study aimed to analyze the effect of progesterone hormone injection on egg production. The present study aimed to analyze the effect of progesterone hormone injection on egg production.

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The current study aimed to evaluate whether the probiotic L. casei could be effective in controlling chicken intestinal colibacillosis. Avian pathogenic Escherichia coli isolates were obtained from livestock, poultry, and traditional bird markets in Indonesia. Cloacal swab samples were collected from ducks infected by the ND virus. Hemagglutination and neutralization tests were conducted on specific pathogen-free embryonated chicken eggs. The results showed that the ND virus isolated from ducks was not related to their vaccinal strain.

**ABSTRACT:**


*E. tenella* peak with the most significant amount of 4,050,460 oocysts on day nine. Meanwhile, the treatment V group reached the highest number of oocysts on day nine. The number of oocysts in treatment group I fluctuated from the lowest number which was obtained for the urea, creatinine, and C-reactive protein levels. The microbial tests revealed a decrease in the total *E. coli* count for groups C, D, and E. The results of the current study indicated that *E. coli* isolates were obtained from livestock, poultry, and traditional bird markets in Indonesia. Cloacal swab samples were collected from ducks infected by the ND virus. Hemagglutination and neutralization tests were conducted on specific pathogen-free embryonated chicken eggs. The results showed that the ND virus isolated from ducks was not related to their vaccinal strain.

**ABSTRACT:**


Based on the result of the current study, out of 100 pooled samples, there were three to nine antibody-negative embryonated chicken eggs for 8-10 days. Hemagglutination and neutralization tests were conducted on specific pathogen-free embryonated chicken eggs. The samples were inoculated in specific pathogen-free embryonated chicken eggs. The current study aimed to isolate and identify the ND virus from ducks infected with the ND virus. The ducks infected with the ND virus rarely show clinical symptoms, thus they can potentially spread the disease to other fowls. The current study aimed to isolate and identify the ND virus from ducks infected with the ND virus.
The present study aimed to estimate carcass characteristics of pure and crossbred guinea fowl populations in Benin. The guinea fowl populations were classified into three climatic zones: Sudanian, Sudano-Guinean, and Guinean. 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 Sudano-Guinean zone (1.27 ± 0.24 kg) and Guinean zone (1.33 ± 0.28 kg). Principal biometric measurements (live weight, chest circumference, body length, drumstick length, shank length, shank diameter, and wingspan) were significantly higher in males. The live weights of guinea fowl in Benin were significantly diverse, but the most widespread plumage colors were pearl grey (30%), their biometric measurements were significantly higher in males. The phenotypes' diversity was relatively abundant (1-Hill: 0.69) in all climatic zones. The phenotypic biodiversity observed in the indigenous guinea fowl (Numida meleagris) populations in Benin. The current study was carried from three climatic zones (Sudanian, Sudano-Guinean, and Guinean) of Benin. Each guinea fowl was reared from hatch to 14 weeks of age in a completely randomized design. A total number of 28 broiler chickens aged 14 days were selected as the sample in this study. Samples were infected using L2 Toxocara vitulorum. The present study was a true experiment using a completely randomized design. A total number of 28 broiler chickens aged 14 days were selected as the sample in this study. Samples were histopathological changes in the liver of broiler chickens infected by L2 Toxocara vitulorum. The main location affected by infection over a long period of time can worsen liver cell and necrosis of the cells. Exposure to infection over a long period of time can worsen liver cell and necrosis of the cells. Chickens are one of the most extended birds kept for human consumption and economic rewards. The main location affected by infection over a long period of time can worsen liver cell and necrosis of the cells. Chickens are one of the most extended birds kept for human consumption and economic rewards.