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

Elbaz AM.
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) 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.
Effect of Pre-Slaughter Antacid Supplementation of Drinking Water on Carcass Yield and Meat Quality of Broiler Chickens.

ABSTRACT:

The first experiment aimed to compare the effects of manual and electric debeaking methods on feed intake, body weight, and some 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 electro debeaked. The blood glucose was lowest in groups A and D at 6 and 24 hours post-beak trimming (PBT), while plasma cortisol level of group A was significantly higher than that of group B at 2 and 6 hours PBT.

Antacid supplementation in drinking water was found to increase the percentage of breast meat, while carcass yield, and thigh, drumstick, and breast meat weights were significantly lower than those of the group at 2 and 72 hours post-beak trimming (PBT). Furthermore, feed intake and body weight markedly decreased in the pullets debeaked with both methods until 72 hours PBT.

Therefore, the present study aimed to investigate the carcass and meat quality of broiler chickens by supplementing the antacid in drinking water. A total of 48 male broiler chickens were divided into two groups that the first group was the control group (did not receive antacid supplementation in the drinking water) and the second group was supplemented with antacid in drinking water (0.10%) for three days pre-slaughter. It was found that the antacid supplementation increased the percentage of breast meat, while carcass yield, and thigh, drumstick, and breast meat weights. The results also showed that antacid supplementation in drinking water could reduce the stress and pain in debeaked chickens.

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

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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.

Detailed postmortem examinations were carried out on the carcasses from the affected farms, and 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 layers were 3.9% and 9.3% in Kaduna and Plateau States, respectively, while the average mortality rates were 8.6% and 8.5% in Kaduna and Plateau States, respectively. The histopathological changes in the affected tissues were similar and characterized by the infiltration of lymphocytes, lymphoblasts, and macrophages.

Generally, the neoplastic lesions were characterized by white to gray, multifocal, firm nodules of varying sizes on the affected organs. In Kaduna State, the affected organs included liver (50%), spleen (25%), proventriculus (25%) and lungs (25%). The histopathological changes in the affected organs were similar and characterized by the infiltration of lymphocytes, lymphoblasts, and macrophages.

In Plateau State, the affected organs included liver (85.7%), spleen (71.4%), heart (42.9%), and kidneys (42.9%), while in Plateau State, the affected organs included liver (50%), spleen (25%), proventriculus (25%) and lungs (25%). The histopathological changes in the affected organs were similar and characterized by the infiltration of lymphocytes, lymphoblasts, and macrophages.

Carasses of commercial layer chickens from 7 and 20 poultry farms in Kaduna and Plateau States, Nigeria, could be attributed to MD. Carasses of 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 detailed postmortem examinations were carried out on the carcasses from the affected farms, and the affected layers were 3.9% and 9.3% in Kaduna and Plateau States, respectively, while the average mortality rates were 8.6% and 8.5% in Kaduna and Plateau States, respectively. The histopathological changes in the affected tissues were similar and characterized by the infiltration of lymphocytes, lymphoblasts, and macrophages.

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Effect of Egg Storage Length on Hatchability and Survival of Koekoek Chickens.

Molapo SM, Mahlehla M, Kompi PP, and Taoana M.


DOI: https://dx.doi.org/10.36380/jwpr.2021.5

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.

The Effect of Substitution of Fish Meal by Maggot Meal (Hermetia Illucens L) on the Relative Length of Digestive Tract, Histomorphology of Small Intestines, and the Percentage of Carcass Parts in Native Chickens.

Auza FA, Purwanti S, Syamsu JA, and Natsir A.


DOI: https://dx.doi.org/10.36380/jwpr.2021.6

ABSTRACT:

The development of the digestive tract organs is closely related to the increased body weight growth in chickens. The present study aimed to determine the effect of using maggot meal as an antibacterial and protein source of fish meal substitution in diets on the relative length of the digestive tract organs, small intestine histomorphology, and the percentage of the native chicken carcass. A total of 140 one-day-old chickens were randomly assigned to one of the five treatments according to a completely randomized design with four replications for each treatment. The treatments included P0 (basal diet + 15% fish meal + 0% maggot meal), P1 (basal diet + 11.25% fish meal + 3.75% maggot meal), P2 (basal diet + 7.5% fish meal + 7.5% maggot meal), P3 (basal diet + 3.75% fish meal + 11.25% maggot meal), and P4 (basal diet + 0% fish meal + 15% maggot meal). The results showed that the use of maggot meal in P3 had a significant effect (P<0.05) on the relative length of digestive tract organs. Maggot meal supplementation in the diet increased the relative length of the digestive tract organs in chickens. The percentage of the carcass parts of chickens was not affected by the substitution of fish meal by maggot meal. Based on these results, it is recommended that maggot meal can be used as a substitute for fish meal in the diet of native chickens to improve the growth performance and relative length of digestive tract organs.

Keywords: Carcass parts, Digestive tract, Histomorphology, Maggot meal, Native chicken.

The Effects of Mixed Vitamins, Minerals, Fatty Acids and Amino Acids Supplementation into Drinking Water on Broiler Chickens' Performance and Carcass Traits.


DOI: https://dx.doi.org/10.36380/jwpr.2021.7

ABSTRACT:

The present study was conducted to evaluate the effects of different levels of the feed supplement containing minerals, fatty acids, vitamins, and amino acids added to drinking water on broiler chickens' performance and carcass traits. A total of 100 one-day-old Cobb 707 (mean weight 46.7 g) were randomly assigned into four treatments, including control group (C), C + 2.25 ml/L Viterna Plus (V1), C + 2.50 ml/L Viterna Plus (V2), and C + 2.75 ml/L Viterna Plus (V3). Each treatment group contained 5 replicates of 5 birds in each (25 birds per treatment). Birds were maintained for 28 days. The results suggested that feed supplement at 2.50 ml/L could successfully improve final body weight, performance index, and carcass weight (P<0.05). However, the substitution of fish meal by maggot meal did not affect the performance and carcass traits of broiler chickens. Based on these results, it is recommended that broiler chickens should be fed with feed supplements containing minerals, fatty acids, vitamins, and amino acids to improve their performance and carcass traits.

Keywords: Broiler chicken, Carcass, Feed supplement, Tropics, Viterna plus.
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 West were aware of biosecurity measures. The biosecurity score (BS) of surveyed farms significantly decreased the occurrence of MD by 24% than those where farmers were equipped with clothes and shoes. The study area was highest in West Gojjam (OR: 0.40, 95% CI: 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 significantly higher in local chickens (OR: 1.70, 95% CI: 1.26-2.28) than exotic chickens, higher in vaccinated chickens (OR: 1.04, 95% CI: 0.76-1.43) than non-vaccinated chickens. The implementation of biosecurity measures in poultry farms is essential to reduce the burden in the study areas. Further works on the economic impacts, virus isolation, and molecular characterization of the disease are suggested.

Keywords:
- Biosecurity Practices
- Characteristics of Poultry Farms
- Cameroon
- Poultry farms

The production and reproduction performance of chicken depends on their hormonal status, especially progesterone hormone, which has been known to correlate with egg weight at hatch. The luteinizing hormone concentration was higher in P control: 1 mg/chicken; P: 0.5 mg/chicken groups. It was concluded that progesterone hormone injection during the quantitative data. The results presented that progesterone hormone injection had a significant effect on the egg weight, shape index, fertility, embryo viability, hatchability, and chick weight at hatch. The luteinizing hormone concentration was higher in P: 0.5 mg/chicken groups.
The current study aimed to evaluate whether the probiotic L. casei reduces the pathogenicity of an organism by creating rigidity in its structure. As a result, the pathogenesis in terms of oocyst production. The present study was conducted using the required to inactivate and attenuate was zero on day five and then increased by day six, seven, and eight and it has reached the day nine. In addition, the treatment IV group attained the apex with the highest number of E. tenella.

The difference in formalin concentration affected the amount of (E. tenella) most optimal concentration to attenuate protozoa. One of the compounds applied for attenuation is formaldehyde. Formaldehyde.

plants alive. The current research was an experimental study aimed to determine the formalin potential would be analyzed by the ANOVA statistical test.

Control of Intestinal [Full text]

abnormalities.

E. coli could be effective in controlling chicken intestinal colibacillosis. Avian pathogenic rings, and E (initially given no could be used as a probiotic in the control of chicken colibacillosis. E. coli cfu/ml was conducted on three-week-old broiler chicks, which were divided into five groups, namely A respectively. Group E was given the oral infusion of 1.5 ml of 1.1 × 10

lymphocyte, and neutrophil counts of the chicken groups. Assessment of liver enzymes showed no significant difference amongst the chick groups except in group B. Similar results were

hemagglutination inhibition tests were performed for confirmation and identification of ND virus. Hemagglutination and swab sample obtained from 3 individual ducks. The samples were inoculated in specific

Based on the result of the current study, out of 100 pooled samples, there were three to nine infected by the ND virus rarely show clinical symptoms, thus they can potentially spread the.

ABSTRACT:

Keywords: in a traditional live bird market center in Indonesia. Cloacal swab samples were

Isolation and Identification of Newcastle Disease Virus from Ducks Sold at Traditional Livestock Market Center in Indonesia. J. World Poult. Res., 11 [1]: 96-100. DOI:

Research Paper

Market Center in Indonesia.

Isolation and Identification of Newcastle Disease Virus from Ducks Sold at Traditional Livestock Market Center in Indonesia.

ABSTRACT:

Keywords: in a traditional live bird market center in East Java, Indonesia. Cloacal swab samples were

Infection in Broiler Chicks Using [Full text]

The positive findings indicated that 22 out of 89 flocks were positive for AI H9N2 virus (2 layers

Etiology of Respiratory Diseases of Poultry Farms in the North Coast

ABSTRACT:

investigation of ND, IB, and AI H5 subtypes viruses, respectively, using real-time PCR. Sample

circulating in Egypt. Two IB isolates were related to the classical strain circulating in Egypt, [Full text

investigate AI H9N2 virus. The samples of 31, 43, and 15 out of 89 flocks were selected for the

El-Samahy HS and Mourad DM.

flocks (79 broilers, 5 layers, 3 ducks, and 2 turkeys) were investigated for four major viral

El-Samahy HS and Mourad DM. Etiology of Respiratory Diseases of Poultry Farms in the North Coast of Egypt.

ABSTRACT:

DOI:

Research Paper

E. coli isolates were obtained from E. coli, and E (initially given no infection before infecting with 1.5 ml of 1.3 × 10

Noo

No
The present study aimed to estimate carcass characteristics of pure and crossbred guinea fowl. Adult (at least 24 weeks old) indigenous guinea fowls were studied. The eyes were predominantly black-white (67.1%). Grey-orange (24.8%) and yellow-orange (10.3%) coloration were more represented on the shanks. The average live body weight was 1.82 ± 0.17 kg for males and 1.71 ± 0.15 kg for females. The growth marker genes (Myogenin, MyoD1, and FGF2) of pectoralis muscle were investigated. Colored lighting stimuli (red and blue) significantly affected hatching capability. The effects of light on hatchability performance were evaluated. Histopathology analysis of infected birds was conducted. The infection caused hydropic inflammation and degeneration of liver cells, cholangitis, and eventually necrosis of the cells. Exposure to infection over a long period of time can worsen liver cell and parasitic hosts of toxocariasis which has the potential for transmission of toxocariasis to humans.

**Keywords:** Indigenous Chicken Genotypes, Growth marker genes, Toxocara vitulorum, Histopathology, Incubation, Light color, Marker Gene expression.