Research Paper

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

Elbaz AM.
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 histopathological technique. Carcasses of commercial layer chickens from 7 and 20 poultry farms in Kaduna and Plateau States, respectively, from February 2017 to March 2018. The age, morbidity, and mortality rates in each of the affected farms were determined.

For the first experiment, chickens’ beaks trimmed with both methods experienced intense pain of varying degrees. Okoroafor ON, Okereke HN, and Udegbunam RI. The chickens’ beak trimmed with both methods experienced intense pain of varying degrees. 

The results revealed that 2 hours PBT, plasma cortisol level in groups B, C, and D were significantly lower than that of the group at 2 and 72 hours PBT. Furthermore, feed intake and body weight markedly decreased in the pullets debeaked with both methods until 72 hours PBT.

**ABSTRACT:**


**Keywords:** Avian neoplastic diseases, Layer chickens, Pathology.
**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.

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**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.**

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**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.

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

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**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.

**Keywords:** Broiler chicken, Carcass, Feed supplement, Tropics, Viterna plus.
Marek’s disease (MD) is a lymphoproliferative and neuropathic disease of Chicken, Marek’s Disease, Northwest Ethiopia, Risk factors, Sero-epidemiology

ABSTRACT:

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

Keywords:

progesterone hormone injection during the production phase of Arabic Gold chicken had a significant effect on egg production and caused varying egg production peak and luteinizing hormone concentration.

It was concluded that progesterone hormone injection during the production phase of Arabic Gold chicken had a significant effect on egg production and caused varying egg production peak and luteinizing hormone concentration.

The study was conducted using a completely randomized design and the obtained data were analyzed with a descriptive analysis for qualitative data and one-way analysis of variance followed with Duncan’s Multiple Range Test as a post hoc test for the comparisons of the hormone concentration in blood plasma. A total number of 60 Arabic Gold chickens aged 26-weeks were divided into three groups based on injected hormone concentration (P1: 1 mg/chicken; P2: 2 mg/chicken; P3: 2.5 mg/chicken). The P1 group was able to reach its peak production (82.9%) at week 29, while the P2 group reached its peak at week 26 (78.9%). In addition, it was found that the P1 group had higher the luteinizing hormone concentration (1.52 ng/ml), compared to P2 (1.34 ng/ml) and P3 (1.36 ng/ml) groups. It was concluded that progesterone hormone injection during the production phase of Arabic Gold chicken had a significant effect on egg production and caused varying egg production peak and luteinizing hormone concentration.

The production and reproduction performance of chicken depends on their hormonal status, especially progesterone hormone, which has been known to correlate with egg production and fertility. Therefore, the effective monitoring of progesterone hormone concentration in blood plasma is essential to reduce the economic impact and disease spread.

In conclusion, the present study revealed a high flock and chicken seroprevalence level of MDV in Gallicos turcicus in the study areas. Further works on the economic impacts, virus isolation, and drug resistance are recommended to control the MDV outbreaks. This study provides valuable information on the serological status of MDV in the study areas and can be used to design effective control strategies.
Formalin Potentials in the Pathogenic Attenuation of Eimeria tenella based on Oocyst Productions


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


Control of Intestinal E. coli Infection in Broiler Chicks Using Lactobacillus casei Isolated from Nono

The present study aimed to estimate carcass characteristics of pure and crossbred...