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.
Antacid, Broiler chickens, Carcass yield, Meat quality.

Antacid is a mixture of sodium bicarbonate, bicarbonate, and citric acid, which can
neutralize stomach acidity and may stabilize the pH of post-mortem carcass and meat.

Effects of Antacid and Vitamin Supplement on Feed intake, Body Weight, and

Alterations in feed intake, body weight changes, and acute gain responses in eight-week-old brown pullets subjected to beak trimming with and without prior administration anti-stress medications.

Avian neoplastic diseases, including Marek's disease (MD), avian leukosis (AL), 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, could be attributed to MD.


Histopathological changes in the affected tissues were similar and characterized perivascular in most cases. Findings from the current study indicated that cases of neoplasms in commercial layer chickens in Kaduna and Plateau States, Nigeria, could be attributed to MD.
Research Paper

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.

Research Paper

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). The maggot meal-fed groups had a shorter relative length of the digestive tract organs, particularly the small intestine. The histomorphology of the small intestine was also different among treatments, with the maggot meal-fed groups showing a decrease in villus height and crypt depth compared to the fish meal-fed groups.

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

Research Paper

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). The supplemented groups had higher feed conversion ratio compared to the control group (P < 0.05). The carcass traits were not significantly affected by the supplementation levels (P > 0.05). Overall, these results indicate that the use of mixed vitamins, minerals, fatty acids, and amino acids can improve broiler chickens' performance and carcass traits when added to drinking water.

Keywords: Broiler chicken, Carcass, Feed supplement, Tropics, Viterna plus.
Marek's disease (MD) is a lymphoproliferative and neuropathic disease of chickens, which is the main factor affecting poultry production. To improve egg production and fertility, researchers have studied the effects of different hormonal concentrations on egg production. In one study, researchers divided 26-week-old chickens into three groups based on injected hormone concentration (P<0.05). The groups were P<0.05 mg/chicken, P<0.05 mg/chicken, and control; P<0.05 mg/chicken. The study was conducted using a completely randomized design and the egg production phase of Arabic Gold chicken had a significant effect on egg production and caused varying egg production peak and luteinizing hormone concentration.

The researchers found that progesterone hormone injection had a significant effect on the egg weight, shape index, fertility, embryo viability, hatchability, and chick weight. The P<0.05 mg/chicken group produced a soft-shelled egg and double egg yolk. Progesterone injection led to no significant effect on hen day production two and six weeks after injection. The P<0.05 mg/chicken group reached its peak at week 26 (78.9%). In addition, it was found that the P<0.05 mg/chicken group was able to reach its peak production (82.9%) at week 29, while the P<0.05 mg/chicken group was not able to reach its peak production.

The results also showed that progesterone hormone injection had a significant effect on the egg weight, shape index, fertility, embryo viability, hatchability, and chick weight. The P<0.05 mg/chicken group produced a soft-shelled egg and double egg yolk. Progesterone injection led to no significant effect on hen day production two and six weeks after injection. The P<0.05 mg/chicken group reached its peak at week 26 (78.9%). In addition, it was found that the P<0.05 mg/chicken group was able to reach its peak production (82.9%) at week 29, while the P<0.05 mg/chicken group was not able to reach its peak production.

The study was conducted using a completely randomized design and the egg production phase of Arabic Gold chicken had a significant effect on egg production and caused varying egg production peak and luteinizing hormone concentration. The results presented that progesterone hormone injection had a significant effect on the egg weight, shape index, fertility, embryo viability, hatchability, and chick weight. The P<0.05 mg/chicken group produced a soft-shelled egg and double egg yolk. Progesterone injection led to no significant effect on hen day production two and six weeks after injection. The P<0.05 mg/chicken group reached its peak at week 26 (78.9%). In addition, it was found that the P<0.05 mg/chicken group was able to reach its peak production (82.9%) at week 29, while the P<0.05 mg/chicken group was not able to reach its peak production.

The outbreak of diseases correlated with BS, showing a tendency of increase in the number of biosecurity scores and a decrease in the number of farms with disease outbreaks. This study underlines the fact that biosecurity in chicken farming should be encouraged by extension of training to the farmers to support the efficient production of chickens by respecting biosecurity that drastically reduces the economic burden in the study areas. Further works on the economic impacts, virus isolation, and molecular characterization of the disease are suggested.
The current study aimed to evaluate whether the probiotic organism could be effective in controlling chicken intestinal colibacillosis. Avian pathogenic Escherichia coli (E. coli) can cause severe disease in poultry, resulting in high morbidity and mortality. To prevent coccidiosis, vaccination is used as a preventive method in livestock. The present study was conducted using the completely randomized design method. A total number of 25 broiler chickens were applied and inoculated with chicken E. coli. The number of oocysts in treatment group I fluctuated from the lowest number which was 79,480 oocysts on day nine. Meanwhile, the treatment V group reached the highest number of 1,363,160 oocysts on day nine. In addition, the treatment IV group attained the apex with the highest number of 871,240 oocysts on day nine. The treatment group III peaked with the most significant number of 618,960 oocysts on day nine. The control group B, without any treatment, had the highest number of 12,150,000 oocysts on day nine. The hematological profile revealed a significant difference in the hemoglobin, white blood cells, platelet counts, and lymphocyte and neutrophil counts of the chicken groups. Assessment of liver enzymes showed a significant difference in the sodium, chlorine, and bicarbonate levels amongst the groups. There was weight gain in chicken groups, except for group B. The results of the current study indicated that formalin soaking with a concentration of 1.2% was the most optimal concentration to attenuate E. coli infection. The research was an experimental study aimed to determine the formalin potential to attenuate E. coli in broiler chickens. Formalin soaking with a concentration of 1.2% was the most optimal concentration to attenuate E. coli infection.
The present study aimed to estimate carcass characteristics of pure and crossbred chicken genotypes. At 14 days of age, crossbred chickens produced from three parental populations, namely Potchefstroom Koekoek (P), Venda (V), and Shear force). The results showed that the Potchefstroom Koekoek breed had higher pH values ranging from 5.66 to 6 at two hours post-slaughter and from 5.54 to 5.2 at 21 hours post-slaughter. The meat colour, meat 

Meat Colour, Meat pH

ABSTRACT:


Effects of Red and Blue Light during the Incubation of Turkey Eggs on Hatchability Performance

ABSTRACT:

A 3 × 3 complete diallel crossing

Histopathology Description of Chicken Liver Infected by L2 Toxocara Vitulorum

Incubate Turkey fertile eggs for 25 days

- Upregulating the expression of muscle growth marker genes
- Significant increase of Scientific and commercial hatchability
- Significant increase of hatching weight


Histopathology Description of Chicken Liver

Orounladji BM, Tozo SK, and Chrysostome CAAM. J. World Poult. Res. 2021; 11(1): 136-138. DOI:

The results showed that the Potchefstroom Koekoek breed had higher pH values ranging from 5.66 to 6 at two hours post-slaughter and from 5.54 to 5.2 at 21 hours post-slaughter. The meat colour, meat pH