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

Sani NA, Ugochukwu CI, Abalaka SE, Saleh A, Muhammed MS, Oladele SB, Abdu PA, and Njoku C (2021).}

Effects of Acetaminophen and Vitamin Supplement on Feed intake, Body Weight, and some Biochemical Parameters of Eight-week-old Broiler Chickens.

Okoroafor ON, Okereke HN, and Udegbunam RI.

Antacid supplementation in drinking water

Breast meat

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


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

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

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Clinical observation of affected chickens indicated that they were anorexic and emaciated.

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, the affected organs included liver (50%), spleen (25%), proventriculus (25%) and lungs (25%).

The 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.

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 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 wing were not significantly affected. The pH of breast meat 45 minutes and the drip loss at 24 hours post-slaughter were significantly higher. The shear-force of breast meat was 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.

Okoroafor ON, Okereke HN, and Udegbunam RI. 

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 chickens. To estimate sero-epidemiology and assess potential risk factors, it is very important to determine MD sero-positivity. Moreover, to measure the association of host and environmental factors, the occurrences and spread of MD were identified in local and exotic chickens in the Northwest Ethiopia. A total of 768 serum samples from 3 zones were collected and assayed for Marek's disease Virus (MDV) antibodies using the indirect enzyme-linked immunosorbent assay (ELISA). The seroprevalence of MDV antibodies was 59.11% (95% CI: 0.53-0.63). The mixed-effect logistic regression analysis showed that the farm category and farm management systems may suggest the economic importance of the disease for chicken farmers. 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 \textit{Lactobacillus casei} could be effective in controlling chicken intestinal colibacillosis. Avian pathogenic \textit{Escherichia coli} was used for the chicken infection and probiotic treatment, respectively. The experimental design was conducted on three-week-old broiler chicks, which were divided into five groups, namely A (healthy control), B (infected without treatment), C (infected and treated with antibiotic), D (infected and treated with \textit{Lactobacillus casei}), and E (initially given \textit{Lactobacillus casei} and \textit{Escherichia coli}, respectively. Group E was given the oral infusion of 1.5 ml of 1.1 \times 10^9 \text{cfu/ml} \textit{Lactobacillus casei} and 1.3 \times 10^9 \text{cfu/ml} \textit{Escherichia coli} before infection with 1.5 ml of 1.3 \times 10^9 \text{cfu/ml} \textit{Escherichia coli}. The difference in formalin concentration affected the amount of probiotics used for the chicken infection and probiotic treatment, respectively.

The obtained data for the urea, creatinine, and C-reactive protein levels. The microbial tests revealed a significant difference amongst the chick groups except in group B. Similar results were obtained for the sodium, chlorine, and bicarbonate levels amongst the groups. There was weight gain in chicken groups, except for group B. There was no significant difference in the hemoglobin, white blood cells, hematological profile revealed a significant difference in the hemoglobin, white blood cells,
The present study aimed to estimate carcass characteristics of pure and crossbred guinea fowls from three climatic zones (Sudanian, Sudano-Guinean, and Guinean) of Benin. Each guinea fowl was selected to determine the biometric measurements and phenotypic biodiversity. The live weights of guinea fowls in the Sudanian zone (1.40 ± 0.18 kg), Sudano-Guinean zone (1.27 ± 0.24 kg), and Guinean zone (1.33 ± 0.28 kg) were significantly diverse, but the most widespread plumage colors were pearl grey (30%), yellow-orange (24.8%), and emerald green (18%). The eyes were predominantly black-white (67.1%). Grey-orange feathers (29.5%) and cinnamon (9.8%) were the most common beak colors. The most common body types were Potchefstroom Koekoek (46%), Venda (39%), and Potchefstroom (15%). The results of the present study might be useful for farmers and breeders in selecting the most suitable breeds based on the climatic zone.