
This study was conducted to evaluate the performance, nutrient digestibility, and heat increment of broilers fed diets supplemented with rice straw treated by effective microorganisms (EM) after thermo-mechanical grinding for improving the nutritive value. The chemical composition of treated rice straw (TRS), based on dry matter was as follows: ME, 1,750 kcal/kg; CP, 11.7%; NDF, 49.3%; ADF, 10.2%; hemicellulose, 38.8%. The experimental diets were iso-energetic containing TRS at different up-grades levels (0% control); 5; 10; 15; 20 or 25%. A total of one hundred eight day-old Cobb 500 broiler chicks were evaluated in this study, distributed in a completely randomized design with 6 treatments and 3 replicates, 10 chicks each. Data were analyzed as a one-way ANOVA, and significant means were separated using Duncan’s multiple range test (P ≤ 0.05). Weight gain (WG), feed intake (FI), feed conversion rate (FCR), nutrient digestibility, were recorded up to 6 wk of age. The WG of feed intake (FI), feed conversion rate (FCR), nutrient digestibility, and excreta soap formation were recorded up to 6 wk of age. The WG and FI were significantly higher for the USA meals than for the South American meals, although the differences were not significant.

Key Words: amino acid, apparent ileal digestibility, broiler, soybean meal origin

389P Performance, carcass yield and excretion of broilers fed diets supplemented with different calcium and fat sources. Medhat Adly Michael*, Ministry of Agriculture, Cairo, Egypt.

The experiment was conducted to investigate the effect of interaction between different calcium and fat sources in broiler diets and its effects on improving the performance, intestinal digestion, total-tract retention of calcium and excreted fat as soap formation in broiler chicks. A total of 240 Hubbard broiler chicks (1-d-old) were allotted randomized into 8 treatments in a 2 × 3 factorial design with 3 replicates and 10 chicks each. The experimental diets containing 2 calcium sources, calcium lactate (CL) or calcium carbonate (CC), at NRC calcium requirement in the presence of 3 fat sources, soybean oil (SBO), sunflower oil (SFO), or palm oil (PO), were included in the diets at level 5%, and 2 control diets, negative control (NC) containing CC or positive control (PC), containing CL. Data were analyzed by 2-way ANOVA and the means were compared using Tukey test at 5% probability. Weight gain (WG), feed intake (FI), feed conversion rate (FCR), nutrient digestibility and excreta soap formation were recorded up to 6 wk of age. The WG of broilers fed diets containing CL plus SBO fortified diet were insignificantly different from those fed with CL plus SFO. A significant (P < 0.05) improvement in FCR was observed with broiler fed diets containing CL plus SBO. Treatments with CC plus PO showed worst values of FCR. Feeding broilers on diets contained CL plus SBO improved (P < 0.05) significantly the digestibility of total nutrients than those fed the NC or PC. Excreted fat as soap formation and abdominal fat were improved with broilers fed diets contained CL than those fed with CC plus experimental fat sources. The nitrogen and calcium retained, as percentage of intake, were improved (P < 0.05) with broilers fed the PC or diets contained CL plus either SBO, SFO or PO than those fed the other experimental diets. In conclusion, dietary inclusion calcium lactate improved the calcium retention, bone calcium and depressed excreted fat as soap formation with improving the broilers' performance.

Key Words: calcium lactate, soybean oil, soap formation, broiler performance.


The aim was to evaluate the effect of varying the nutritional density, ME, CP, amino acids and minerals on the pellets W-36 on performance from 1 to 6 weeks of age. The treatments consisted of diets varying in nutrient density, with increases and decreases of 5 and 10% considering a basal diet (100%), totaling 5 treatments with 7 replicates with 13 pullets each. It assessed the body weight (BW, g/pullet), body weight or 15% compared with those fed with 20 or 25% TRS. In conclusion, treated rice straw is a potential substitute for common ingredients used as energy and protein sources in broiler diets with reducing the feed cost while maintaining performance.

Key Words: treated rice straw, heat increment, digestibility, broiler performance.