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Conference Information and Proceedings

P226 Effects of increasing dietary levels of raw full fat soybeans on performance and pancreas weight of broiler chickens

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The aim of this study was to evaluate the influence of soybean meal and oil replacement by increasing levels of raw full-fat soybean in broiler diets on growth performance and pancreas weight. In the experiment in total 208 Ross 308 male chickens were used and live body weight in week intervals, feed conversion ratio and pancreas weight at the end of experiment were measured. Four dietary treatments were used; Positive control (without raw full-fat soybean) and three experimental groups with rising content (4%, 8% and 12%) of raw full-fat soybean. All diets were formulated to be isocaloric and isonitrogenic (20.5 % CP; 12.7 MJ ME/kg). Each treatment had four replicates with 13 broilers. The experiment period was from 10th to 38th day of age. On the beginning, the groups were set up with similar live body weight of broilers without significant differences and each broiler was individually labeled by wing marks. The presence of raw full-fat soybean in broiler diets decreased live body weight in all treatments; significantly lower body weight ($P < 0.05$) was observed in the group feed with 12% of raw full fat soybean in diet in comparison with control group. Feed conversion ratio was higher in all groups feed with diet containing raw full fat soybean; but significantly higher FCR ($P < 0.05$) was found only in group with 12% in comparison with control group. Pancreas weight significantly increased ($P < 0.05$) when raw full-fat soybean was in the diets.

P227 Determining availability of Fe and Zn in chicken meat when fed with mineral improved wheat

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This study was conducted to investigate the effect of mineral biofortified wheat with fungal phytase addition on iron (Fe) and zinc (Zn) availability in broiler chicken breast muscle and liver, their excretion in feces and digestibility in intestines. Broiler chickens received six different Fe and Zn dietary content in biofortified wheat – soybean meal diet containing either no phytase or recommended levels of fungal phytase. Control diet contained 190 mg Fe and 93 mg Zn/kg diet. Diets were randomly fed to eleven-day-old Ross (308) broilers (each treatment had 7 replicates of 7 birds) for 11 days. Body weight and feed intake were recorded at 19 and 22 day of age. At the end of the experiment birds were killed by dislocation of their neck and their left breast muscle and liver were collected to measure Fe and Zn retention. Titanium dioxide was included in the diets as an indigestible marker. Excreta were collected quantitatively from day 19 to 22 in order to calculate mineral excretion and digestibility. The results showed that fecal mineral excretion and apparent digestibility of Fe increased linearly with increased levels of Fe and Zn in biofortified wheat, while digestibility of Zn decreased linearly with decreasing levels of Zn in biofortified wheat. Supplementation of phytase had no effect on broiler performance or mineral retention in this study.