



Effect of using cumulative levels of sesame (*Sesamum indicum* L) meal with phytase enzyme on performance of broiler chickens

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For determining effect of feeding cumulative levels of sesame seed meal (SSM) with phytase enzyme on the performance of broilers chickens a completely randomized factorial design with 4 treatments in 2 levels of using or not using phytase enzyme and 4 replicates with 384 Ross 308 broiler chicks was conducted. At the end of the trial daily body weight gain (BW), feed intake (FI), feed conversion rate (FCR), carcass yields, hemogelatination inhibition test (HI), phosphorous digestibility (P DI), calcium and phosphor in blood and tibia ash were determined and ileum intestinal tissues thickness were tested. In the first of the aviculture period using (SSM) and phytase together increased (FI) ($P < 0/05$). A significant effect between control group and other groups in (FI) was seen in the growth period ($P < 0/05$). but in end of culture period we had no significant effect between treatments about (FI). In the whole period of trial (BW) decreased with increasing levels of (SSM) ($P < 0/05$). Increasing (SSM) had lead to increasing (FCR) in all aviculture periods of this trial and though using phytase enzyme could decrease (FCR) but, it had no significant effect on (FCR) ($P < 0/05$). Carcass yield decreased with using (SSM) diet and using phytase had an significant effect on it and increased it ($P < 0/05$). Data showed using (SSM) in high levels as a replacement for soybean meal was effective on aggregation abdominal fat. Using (SSM) in high levels decreased (PDI) and using phytase enzyme had significant effect on ileum (P DI) ($P < 0/05$). Phosphor and calcium content in blood and tibia ash increased by using (SSM) and phytase enzyme levels ($P < 0/05$). Feeding cumulative levels of (SSM) and phytase enzyme had no significant effect on (HI). data showed bed moisture was higher in groups fed high levels of (SSM) diets and utilization of phytase enzyme was effective on decreasing bed moisture ($P < 0/05$). Mucous and sub mucous and total thickness diameters of ileum were higher by using (SSM) in broiler diet ($P < 0/05$). In this trial the datra showed that the best levels of (SSM) to get best chicken's performance were 5, 10, and 15% of (SSM) with phytase enzyme in the starter, growth and finisher of the aviculture periods respectively.

Keywords: Broiler chickens, Sesame meal, Phytase enzyme, Performance, Digestibility

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