## **Abstract**

Recently, substitution of poultry feed ingredient by using insect meals, has been a new trial focus; so, the objective of the present trial is to determine the optimal inclusion level and assess the effects of black soldier fly (BSF; Hermetia*illucens*) larvae meal Amin MAG® on carcass traits, meat quality parameters, and the caecum microbiota in broiler chicken. A total 144 one-day-old cobb chicks were randomly distributed into 4 dietary treatments, designed as follows: G1 (control group fed basal diet), G2 (group contains 6% BSF), G3 (group contains 12% BSF), and G4 (group contains 15% BSF). All the treated groups were subjected to the same management factors. At the end of the experimental trial on day 35, The broilers were slaughtered, dressed, and weighted (4 birds per group). Our results showed that the inclusion of BSF in cobb diets had no detrimental impact on carcass traits ( relative weights of liver, heart, spleen, thymus, gizzard, and abdominal fat) , return parameters from carcass and meat quality except tenderness decreased significantly in G2 and G3 compared to the control group and G4 , and BSF displays anti-oxidant effects with a significant decrease in malondialdehyde (MDA) with an increase in BSF in the diet . BSF didn’t affect normal inhabitant bacteria of the intestine, such as lactobacillus and total bacterial count nor did it increase pathogenic bacteria, such as salmonella.

In conclusion, adding BSF to cobb diets had no adverse effect on the meat quality parameter or gut health.

**Keywords**: Cobb; Carcass traits; Black soldier fly; Meat quality; Cecal microbiota.