

### **15. Effect of dried mealworms (*Tenebrio molitor*) larvae and olive leaves (*Olea Europaeae L.*) on growth performance, carcass yield and some blood parameters of Japanese quail**

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The aim of this study was to investigate the effect of *Tenebrio molitor* (TM) and/or olive leaves (OL) supplementation to the diet of quail on their growth performance, carcass yield and some blood parameters. One hundred and forty-four 1-day-old Japanese quails (body weight: 29.9±0.46 g, mean ± SE) were divided into four groups of 36 chicks, with three replications. The chicks in Group 1 were fed with a standard commercial diet (Diet1); Group 2 received the Diet1 diluted with 3% replacement of dried *Tenebrio molitor* (TM) larvae (Diet2); Group 3 received the Diet1 with 3% of olive leaves (Diet3); and Group 4 received the Diet1 with 3% of TM and 2% of OL (Diet4). Feed and water were provided *ad libitum*.

The results showed that TM and OL inclusion promoted growth performance of quails at 5 weeks of age (205.0 vs. <192g; P=0.001). Feed conversion ratio (FCR) of the group 3 was significantly (P <0.01) reduced compared to the others groups (2.78 vs. >3). The overall mortality was not significantly different (at around 6.25%; P>0.05) for any of the dietary regimens. Carcass [71.5-74.3%], gizzard [2.5-2.7%], heart [1.1-1.2%] and giblets [6.8-6.9%] yields were not significantly (P>0.05) influenced by the diet. No significant effect of the diet was observed for blood constituents (TP: 3.0-3.2 g/dL; Alb: 1.3-1.4 g/dL; Glob: 1.6-1.7 g/dL; Alb/Glob: 0.76-0.80%; Creatinine: 0.25-0.28mg/dL; Urea: 6.53-6.81g/dL) and lipid profile (TC: 190.7-197.0mg/dL; TG: 214.6-220.2mg/dL; HDL: 54.3-56.1mg/dL; LDL: 91.6-99.1mg/dL; VLDL: 42.4-45.1mg/dL).

In conclusion, the results demonstrated that the supplementation with TM (3%) and OL (2%) of quail diet improve body weight at 5 weeks old, reduce FCR and did not negatively influence carcass yield and blood parameters of Japanese quail.