

THE EFFECT OF ORGANIC SELENIUM ON BODY, EGGS AND BLOOD BIOCHEMICAL PARAMETERS IN JAPANESE QUAILS

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Summary. The effect of organic selenium (Se) on body and egg weight, Se accumulation in eggs, blood biochemical parameters in Japanese quails (*Coturnix coturnix japonica*) was investigated experimentally. One hundred and eighty Japanese quails females (n=180) were randomly divided into three groups (Groups 1-3) of sixty birds each. Group 1 was served as control. Quails in Groups 2 and 3 were fed diet supplemented with 0.3 g/kg and 0.5 g/kg of organic Se *Sel-Plex*TM, which is a natural product based on the yeast (*Saccharomyces cerevisiae* CNCM I-3060) and contain selenium in organic form.

In Groups 2 and 3 mean body weight of Japanese quails was on 4.44 % and 4.73 % higher, egg weight on 8.7% and 7.5% higher, compared to controls in Group 1 (P<0.05). Furthermore, diet supplementation with *Sel-Plex*TM in Groups 2 and 3 on 96.7% and 160.6% increased accumulation of Se in eggs than in controls (P<0.01). In addition, supplementation of diet with *Sel-Plex*TM in Groups 2 and 3 affected the several blood parameters: total protein level increased on 12.9% and 15.5%, albumin level on 3.1% and 10.7%, activity of ALT on 26.09% and 23.0% and of AST on 21.5% and 16.7%, respectively, compared to controls in Group 1 (P<0.05). This study showed that the supplementation of diet with organic Se positively influenced body and egg weight, Se accumulation in eggs, blood biochemical parameters in Japanese quails.

Keywords: organic selenium, diet, body and egg weight, blood parameters, Japanese quails.