

## رقم البحث: ( 1 )

### عنوان البحث باللغة الانجليزية :

Effect of dietary sodium butyrate supplementation on growth, blood biochemistry, haematology and histomorphometry of intestine and immune organs of Japanese quail

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إسم المجلة – سنة النشر:

### المؤلفين

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### الملخص باللغة الانجليزية

## ABSTRACT

New strategies must be developed to improve poultry performance and health. One of these strategies is the use of supplementations as sodium butyrate (SB) to improve the physiological status and then increasing the growth performance, but the best period of age in which the addition of SB is more effective on birds is not well understood. Therefore, the aim of this study was to investigate the effect of dietary inclusion of SB supplementation through the first, second or whole growth period on some physiological indices and growth performance of growing Japanese quail. In total, 240 unsexed 1-day-old quail chicks were divided into four groups (three replicates per group of 20 chicks in each). The first group was fed basal diet without SB from 1 to 42 days (control, T1), while SB at a rate of 1 g/kg basal diet was mixed with the feed of the 2nd, 3rd and 4th groups of chicks from 1 to 21 days (SB 1 to 21, T2), 1 to 42 days (SB 1 to 42, T3) and 22 to 42 days (SB 22 to 42, T4) of age, respectively. The results stated that addition of SB significantly improved live BW at 21 days, feed conversion ratio (FCR) and BW gain (BWG) during 1 to 21 days in T2 and T3 groups compared to T1 and T4 groups. During the whole period, group T3 had higher BWG and better FCR than the other groups (T1, T2 and T4). At 21 days, no significant differences among all treatments were detected on haematology and serum biochemistry except total protein and cholesterol. At 42 days, SB supplementation significantly improved most serum constituents, haematological parameters, villus height and width of intestine

and morphometry of immune organs. The group fed SB throughout the experiment (T3) showed the best results. In conclusion, it is recommended feeding quail on diets containing SB through the whole growth period to show its affirmative impact on the growth and physiological indices.