

# **Effect of dietary supplementation of Jerusalem Artichoke extract on performance, blood biochemistry, antioxidant parameters, and immune response of growing Japanese quail.**

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## **ABSTRACT**

**This study aimed to examine the impact of the Jerusalem Artichoke extract (JAEx) as a feed additive on the performance, blood biochemistry, antioxidant indices, immunity, and intestinal microbiota in growing Japanese quails. In total, 270 birds were randomly divided into three groups, with six replicates of 15 birds each. The first group was fed a control diet without JAEx. The second and third groups received the control diet plus 200 and 400 ppm JAEx, respectively. The groups fed the diet containing 200 and 400 ppm JAEx had the best body weight, body weight gain and feed conversion ratio, and faster growth rate with the best performance index, compared with the control group ( $p < 0.05$ ). The control quails had a lower feed intake than the JAEx-treated quails. The groups fed JAEx 200 and 400 ppm had the lowest lipid profile, blood glucose, liver enzymes, Salmonella and Escherichia coli population and the highest antioxidant indices, immune responses and Lactobacilli population number compared to the control group ( $p < 0.05$ ). In conclusion, the addition of JAEx at 400 ppm followed by 200 ppm improved the productive performance, antioxidant capacity, blood biochemical and immunological indices, and intestinal microbiota in growing Japanese quails.**

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