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The Effect of Prosopis Farcta Beans Powder as Additive in Japanese Quail Ration on the Muscle Fatty Acids and Serum Biochemical Parameters

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Abstract

The beans of *Prosopis farcta* (PFB) have been recognized as a potential food source with health benefits and the ability to improve fatty acid composition. The aim of this study was to investigate the effect of PFB on the fatty acid composition of the thigh muscles and the biochemical parameters of the blood in Japanese quail. A total of 78 female Japanese quails were selected and divided into 6 groups. Each group received different diets, including PFB at 2% and 4% levels, or oil at a 0.5% level. After 30 days, blood and tissue samples were collected and sent to the laboratory. Adding PFB powder to the diet resulted in a significant increase in serum levels of total cholesterol, total protein, albumin, globulin, uric acid, and creatinine. The group that received 4% PFB had the highest level of palmitoleic acid and the lowest level of arachidonic acid in their muscles. Additionally, the group that consumed PFB along with oil had lower levels of total cholesterol and other biochemical parameters compared to the other groups. No pathological lesions were observed in the heart, kidneys, or intestines. PFB may help improve the fatty acid composition in the muscles of Japanese quail and could have health benefits, particularly in preventing cardiovascular diseases. However, further research is needed to explore the comprehensive and long-term effects of this food source in Japanese quail and other species.

Key words: Fatty acids, Quail, Blood Biochemical parameters, *Prosopis Farcta* Beans (PFB)

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