

عنوان مقاله:

Effect of Dietary Supplementation of *Silybum marianum* and Artichoke (*Cynara scolymus* L.) on Japanese Quail's Carcass Characteristics, Oxidative Stability, and Quality of Breast Meat

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خلاصه مقاله:

Background: Herbs possess a large amount of antioxidants; thus, using them in the poultry diet can improve the quality of final products. Objectives: This study investigated the effects of dietary supplementation of artichoke, *Silybum marianum*, and their mixture on Japanese quail's carcass characteristics, oxidative stability, and breast meat quality. Methods: A total of 120 one-day-old Japanese quail were studied in a completely randomized design with 4 experimental treatments (0%, 1.5% artichoke, 1.5% *S. marianum*, 1.5% mixture of artichoke and *S. marianum*). Each treatment consisted of 3 replicates of 10 birds. At the end of the experiment (day 42), the carcass characteristics of the birds were recorded, and the physical characteristics, chemical composition, color, and oxidative stability of breast meat were evaluated. Results: The results showed no significant difference among the experimental groups regarding pH, dry matter, ash, drip loss, and cooking loss. Dietary enrichment with artichoke and *S. marianum* caused a decrease in the mean body weight in the experimental treatments compared to the control group ($P < 0.05$). Dietary supplementation with herbal powders increased the crude protein and fat content of breast meat, and group 4 (artichoke+*S. marianum*) had a higher mean than other groups ($P < 0.05$). The hardness of breast meat in the treatment groups has decreased compared to the control group. Compared to the control group, the amount of lightness in the treatments has reduced, and redness and yellowness have increased. TBARS (thiobarbituric acid reactive substances) index showed a significant decrease in the investigated treatments compared to the control group ($P < 0.05$). Conclusion: Dietary supplementation of *S. marianum* and artichoke improved nutritional value and increased oxidative stability of breast meat in Japanese quail. However, they adversely affected birds' weight gain and feed consumption.

کلمات کلیدی:

Artichoke, Dietary enrichment, Meat quality, Oxidative stability, *Silybum marianum*

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