

# **The Effect of Pomegranate Peel Powder (*Punica granatum* L.) in Feed on Blood Cholesterol Levels in Broiler Chickens**

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## *ABSTRACT*

*This study aimed to determine the effect of incorporating pomegranate peel powder into feed on the blood cholesterol levels of broilers. The study used 80-day-old chicks of the Cobb broiler strain. A Completely Randomized Design was used with five treatments and four replicates, with each replicate consisting of four chickens. The treatments tested were: P0 (100% commercial feed); P1 (99% commercial feed + 1% pomegranate peel powder); P2 (98% commercial feed + 2% pomegranate peel powder); P3 (97% commercial feed + 3% pomegranate peel powder); and P4 (96% commercial feed + 4% pomegranate peel powder). The treatment diets were provided ad libitum from days 8 to 35. Parameters measured at 35 days of age included total cholesterol, triglyceride, low-density lipoprotein (LDL) and high-density lipoprotein (HDL) levels in blood serum collected from the brachial vein. The results showed that including pomegranate peel powder at levels up to 4% in broiler chicken feed effectively improved blood cholesterol levels by lowering total cholesterol, triglyceride, and LDL levels while increasing HDL levels. Specifically, a 4% inclusion level reduced triglyceride levels to 90.0 mg/dL. Meanwhile, 3% effectively reduced LDL to 17.8 mg/dL while increasing HDL to 73.1 mg/dL, and 1% lowered total cholesterol to 96.3 mg/dL.*

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**Keywords :** *broilers, pomegranate peel powder, triglycerides, total cholesterol levels*