



بِسْمِ اللَّهِ الرَّحْمَنِ
الرَّحِيمِ



بحث رقم (6)

طبيعة البحث: مشترك ومنشور (مستخلص من رسالة).

عنوان البحث:

**EFFECT OF ADDING POMEGRANATE PEELS TO
GROWING JAPANESE QUAIL DIET ON PERFORMANCE,
BLOOD AND IMMUNITY PARAMETERS.**

تأثير إضافة قشر الرمان إلى علائق السمان الياباني على الأداء الإنتاجي وبعض
صفات الدم والمناعة خلال مرحلة النمو.

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ABSTRACT

Pomegranate peel (PP) improved growth performance, nutrient digestibility and immunity moreover, reducing intestinal and fecal pathogenic microorganisms. So, the experimental work was designed to study the effects of PP powder as a natural feed additive on growing Japanese quails. Aggregate of 180 growing Japanese quail at ten days age were distributed into five groups, each group contain three replicates (12 bird each). The first group fed on basal control diet without any additives, the second group fed control diet plus sub-therapeutic dose of

oxytetracyclin (1g/kg diet). While, third, four and five groups fed on basal control diet with 0.5 %, 1.0 % and 1.5 % PP powder respectively. The obtained results showed that: Pomegranate peel treatments significantly increased body weight (LBW_{38d}), body weight gain (BWG₁₀₋₃₈) and performance index (PI₁₀₋₃₈), while, feed intake (FI₁₀₋₃₈) was significantly lower and feed conversion (FC₁₀₋₃₈) was significantly improved in all treated groups especially with 1.0 % PP level compared with antibiotic and control groups. Females had higher LBW_{38d}, BWG₁₀₋₃₈, PI₁₀₋₃₈ and best FC₁₀₋₃₈ than males. Except both very low density lipoprotein and triglycerides serum biochemical indices such plasma total cholesterol, low density lipoprotein and high density lipoprotein significantly decreased by PP addition. The best antioxidant parameters (except Glutathione peroxidase) and immune responses and intestinal microflora count, favoring the quail fed diet supplemented with PP which had the best growth performance, especially 1.0 % PP level. Quail fed diet containing 1.0% of PP had the lowest thiobarbaturic acid. Pomegranate peel (3% and 1%) supplementation desirably increased *Lactobacillus* count as compared with those fed diets appended with antibiotic and the control groups and decreased both *E- coli* and *Salmonella* counts compared to group of control. In conclusion, PP addition by 1.0% can improve productive and physiological parameters and also a good alternative to antibiotic for promoting quail growth.