



البحث الأول

عنوان البحث باللغة الانجليزية :

Alagawany, M., Abd El-Hack, M. E., Farag, M. R., **Elnesr, S. S.**, El-Kholy, M. S., Saadeldin, I. M., & Swelum, A. A. (2018). Dietary supplementation of *Yucca schidigera* extract enhances productive and reproductive performances, blood profile, immune function, and antioxidant status in laying Japanese quails exposed to lead in the diet.

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ABSTRACT

The present study investigated the toxic impacts of lead (LD) on the productive and reproductive performances of Japanese quails and the role of *Yucca schidigera* extract (YSE) in reducing these impacts. A total of 360 mature Japanese quails (at 2 months of age) were used and the experiment was lasted for 8 wk. The birds were divided into 6 equal groups as follows: control (basal diet), basal diet+ 100 mg LD/kg diet, basal diet + YSE (100 mg/kg diet), basal diet + YSE (200 mg/kg diet), basal diet + LD (100 mg/kg diet) + YSE (100 mg/kg diet), and basal diet + LD (100 mg/kg diet) + YSE (200 mg/kg diet). LD resulted in a significant decrease in feed intake (FI), feed conversion ratio (FCR), and egg production of birds compared with the control group. Supplementation of YSE (100 or 200) to LD containing diet could significantly improve the quail performance parameters to be comparable with the control values. Fertility and hatchability % were decreased by LD, whereas YSE at both levels (100 or 200) separately or in combination with LD showed fertility and hatchability percentages comparable to that of control. Triglycerides, cholesterol, and LDL contents in LD plus YSE100 or LD plus YSE200 groups were significantly decreased than LD alone group. LD significantly decreased superoxide dismutase and catalase activities in the serum with no effect on reduced glutathione content. Co-exposure to YSE100 or YSE200 with LD significantly increased the catalase activity and numerically increased the superoxide dismutase activity than LD alone. YSE100 or YSE200 decreased malondialdehyde contents than LD alone group. LD plus YSE100 or YSE200 groups exhibited significant improvements in the level of immunoglobulins. Co-exposure to YSE with LD significantly decreased the LD residues in egg than the LD group. The obtained results showed that YSE exhibited a potential modulatory role against the LD-induced inhibitory effects on the productive and reproductive performances of Japanese quails and YSE at 200 mg/kg diet was more effective than 100 mg/kg diet in reversing the LD-induced alterations.