

## **The Effect of Different Levels of Seed and Extract of Harmal (Peganum harmala L.) on Immune Responses of Broiler Chicks**

**Authors :** M. Toghyani, A. Ghasemi, S. A. Tabeidian

**Abstract :** The present study was carried out to evaluate the effect of different levels of dietary seed and extract of Harmal (Peganum harmala L.) on immunity of broiler chicks. A total of 350 one-day old broiler chicks (Ross 308) were randomly allocated to five dietary treatments with four replicates pen of 14 birds each. Dietary treatments consisted of control, 1 and 2 g/kg Harmal seed in diet, 100 and 200 mg/L Harmal seed extract in water. Broilers received dietary treatments from 1 to 42 d. Two birds from each pen were randomly weighed and sacrificed at 42 d of age, the relative weight of lymphoid organs (bursa of Fabricius and spleen) to live weight were calculated. Antibody titers against Newcastle and influenza viruses and sheep red blood cell were measured at 30 d of age. Results showed that the relative weights of lymphoid organs were not affected by dietary treatments. Furthermore, antibody titer against Newcastle and influenza viruses as well as sheep red blood cell antigen were significantly ( $P < 0.05$ ) enhanced by feeding Harmal seed and extract. In conclusion, the results indicated that dietary inclusion of Harmal seed and extract enhanced immunological responses in broiler chicks.

**Keywords :** broiler chicks, Harmal, immunity, Peganum harmala

**Conference Title :** ICSRD 2020 : International Conference on Scientific Research and Development

**Conference Location :** Chicago, United States

**Conference Dates :** December 12-13, 2020