

EFFECT OF EXTRACT AND POWDER OF CHAMAMILE FLOWER (*MATRICARIA CHAMOMILLA*) ON IMMUNE RESPONSES IN BROILER CHICKS

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INTRODUCTION

Phytogenic and herbal products have been given considerable attention as possible in-feed antibiotics substitutions. Beneficial effects of bioactive plant substances in poultry nutrition may include the stimulation of appetite and feed intake, the improvement of endogenous digestive enzyme secretion, activation of immune responses and antibacterial, antiviral and antioxidant actions (Bedford, 2000). Chamamile flower has been a subject of considerable interest as a medicine and therapeutic agent worldwide since ancient times (Abaza et al., 2003). It contain up to one per cent of an essential oil with azulene that turns blue on distillation and bisabolo and farnesene also flavonoid and coumarin glycosides and fatty acids these substance give anti-inflammatory, antiseptic, carminative, diaphoretic, sedative properties (Panda, 2005). The objective of this experiment was to evaluate effect of extract and powder of chamamile flower on immune responses in broiler chicks.

MATERIAL AND METHODS

In this experiment 420 one day old broiler chicks in a completely randomized design with 6 treatments and 5 replicates were used. Broiler received treatments from 1 to 42 d. The treatments included: control group, growth promoter antibiotic, two levels of chamamile flower powder (2 and 4 g/kg diet, and two extract levels of chamomile flower (20 and 30 ml/lit of) in drinking water. The immune parameters included anti body titer against sheep red blood cells (SRBC) and lymphoid organs (bursa of Fabercius and spleen) weight. Total data were analyzed by SAS (2008) and LSD was used for comparison means.

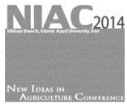
RESULTS AND DISCUSSION

Chamomile powder and extract not significantly tended to increased antibody titer against SRBC. Chamomile powder at levels of 4 g/kg were significantly increased percentage of bursa of Febercius weight ($P<0.05$). Improvement in immune responses of broiler chicks by chamomile flower is related to inhibit the harmful intestinal microorganisms, thus counter acting excessive growth (Abaza *et al.*, 2003).

Key Words: Chamomile flower, Immunity, Broiler chick

REFFERENCES

- Abaza, I.M., M.A. Asar, G.E. El-Shaarrawi and M.F. Hassan, 2003. Effect of using Nigella seed, Chamomile flowers, Thyme flowers and Harmala seed as feed additives on performance of broiler. Egypt. J. Agric. Res., 81: 735-749.
- Bedford, M., 2000. Removal of antibiotic growth promoters from poultry diets. World's Poult. Sci. J. 56, 347–365.
- Panda, H., 2005. Handbook on medicinal Herbs with uses. Asia Pacific Business Press Inc. 106-E, Kamla Nagar, Delhi-110 007 (INDIA).



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