INTRODUCTION
Phytophagic 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). Chamomile flower has been a subject of considerable interest as a medicine and therapeutic agent worldwide since ancient times (Abaza et al., 2003). It contains up to one per cent of an essential oil with azulene that turns blue on distillation and bisabolol and farnesene also flavonoid and coumarin glycosides and fatty acids these substances give anti-inflammatory, antiseptic, carminative, diaphoretic, sedative properties (Panda, 2005). The objective of this experiment was to evaluate effect of extract and powder of chamomile 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 chamomile 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

REFERENCES
The 1st International Conference on New Ideas in Agriculture
Islamic Azad University Khorasgan Branch
26-27 Jan. 2014, Isfahan, Iran