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Agricultural Research, Education and Extension Organization  
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**Effects of herbal growth promoters produced in animal science research institute of Iran (ASRI1 and ASRI2) in comparison with commercial prebiotic on immune responses, performance and physiological and metabolic responses of broilers**

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**Abstract**

To evaluate the effects of herbal growth promoters and prebiotic on performance and physiologic and metabolic parameters of broiler chickens, an experiment was conducted in a completely randomized design as a 2×3 factorial with three types of herbal growth promoters (ASRI1, ASRI2 and commercial supplement), two levels of prebiotic Lactose (0 and 1000 g/ton), plus a control treatment (without any additives), using 6 replicates and 25 as-hatch chicks per each replicate. A basal corn- soybean meal diet (without any additives) was considered as control.

The effects of herbal growth promoter and prebiotic on body weight, feed intake, feed conversion ratio, liveability percentage and production index were not significant ( $P > 0.05$ ). Also, percentage of carcass, thigh, breast, back and neck, abdominal fat and relative weight of internal organs were not influenced by herbal growth promoter and prebiotic ( $P > 0.05$ ). Effects of herbal growth promoter and prebiotic on SRBC, IgG and IgM, PHAP and DNCB response were not significant ( $P > 0.05$ ), but percentage of heterophile, lymphocyte and heterophile to lymphocyte ratio were affected by dietary treatments ( $P < 0.05$ ). Blood parameters including Calcium, Phosphorus, total protein, albumin, globulin cholesterol, HDL, LDL and intestinal morphological indices were not affected by herbal growth promoter and prebiotic, but calcium level affected by prebiotic ( $P < 0.05$ ). According to the results, commercial imported growth promoter can be substituted by ASRI1 and ASRI2 products.

**Keywords:** Herbal growth promoters, Prebiotic, Immunity, Performance, Physiologic and metabolic parameters, Broiler chickens