



## Effect of supplementation of Ashwagandha (*Withania somnifera*) and Shatavari (*Asparagus racemosus*) on growth performance of broilers

A.G. MANE, A.N. KULKARNI, R.L. KORAKE AND S.S. BHUTKAR

**ABSTRACT:** The trial was conducted for a period of six weeks on 240 day old broiler chicks, uniformly distributed into four groups, three replicates of 20 chicks in each T<sub>1</sub>, T<sub>2</sub>, T<sub>3</sub> and T<sub>4</sub> groups. The chicks were fed with standard starter mash which contained crude protein 22.01 per cent and metabolizable energy 2985 Kcal / kg (calculated value) upto three weeks of age. For next 3 weeks *i.e.* from 4 to 6 weeks of age with finisher mash which contained crude protein 19.11 per cent and metabolizable energy 3030 Kcal / kg (calculated value). Group T<sub>1</sub> (control) received standard broiler diet without any supplementation, T<sub>2</sub>, T<sub>3</sub> and T<sub>4</sub> received standard broiler diet with supplementation of Ashwagandha powder @ 5 kg/t, Shatavari powder @ 10 kg/t and Ashwagandha and Shatavari @ 10 kg/t of feed, respectively. The chicks were kept in floor pens, water and feed were provided *ad libitum* throughout the experimental period of 42 days. The supplementation of Shatavari powder to basal diet showed significant (P<0.05) effect on body weight, weekly gain in body weight and feed conversion ratio of broilers in group T<sub>3</sub> as compared to those in T<sub>2</sub>, T<sub>4</sub> and control T<sub>1</sub> groups. The feed intake was significantly (P<0.05) higher in group T<sub>1</sub> than in T<sub>2</sub>, T<sub>3</sub> and T<sub>4</sub> groups. The net profit per bird for group T<sub>3</sub> supplementation with Ashwagandha was higher *i.e.* Rs. 34.20 as compared to those obtained from T<sub>1</sub>, T<sub>2</sub> and T<sub>4</sub> groups.

**KEY WORDS :** Broiler chicks, Ashwagandha, Shatavari, Performance

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### INTRODUCTION

The dynamic Indian poultry industry is growing at an estimated rate of 6-7 per cent for egg and 15-20 per cent for meat production per annum. India possesses second rank in egg production and sixth in broiler production in the world (Anonymous, 2011). Though Indian poultry industry recorded faster growth; it is witnessing a series of problems due to high ambient temperature in the tropics, accompanied by high relative humidity is one of the most important stressors. The adverse effects of hot weather on the growth performance of broilers are overcome by using Ayurvedic formulation containing herbs (*Withania somnifera*, *Asparagus racemosus*, *Magifera indica* and *Ocimum sanctum* etc.) and fortifying with synthetic amino

acids and vitamins. It is proved that of these, Ashwagandha (*Withania somnifera*) possesses antistress, adaptogenic, immunomodulatory and performance enhancing property. "Shatavari" is also a herbal plant known as the "Queen of herbs" in Ayurveda having properties like nutritive tonic, anti-stress (Kamat *et al.*, 2000). The root powder of *Asparagus racemosus* is used as a herbal feed additive/supplement in poultry feed. Shatavari augments the appetite and stimulates the liver. In a recent study by Sharma *et al.* (1986), Shatavari has been shown to possess anabolic properties *viz.*, growth promotion, laxative, antacid and appetizer. Considering these nutritional benefits of Ashwagandha (*Withania somnifera*) and Shatavari (*Asparagus racemosus*) herbs, effort has been made to study the effect of supplementation of *Withania somnifera* (Ashwagandha) and Shatavari (*Asparagus racemosus*) in the diet of broiler chicks.

### MATERIALS AND METHODS

The trial was conducted for a period of six weeks on 240 day old broiler chicks, uniformly distributed into four groups, three replicates of 20 chicks in each T<sub>1</sub>, T<sub>2</sub>, T<sub>3</sub> and T<sub>4</sub> groups.

#### MEMBERS OF RESEARCH FORUM

**Address for correspondence :**

R.L. Korake, Department of Animal Husbandry and Dairy Science, College of Agriculture, PARBHANI (M.S.) INDIA  
Email : ukmeel@gmail.com

**Associated Authors' :**

A.G. Mane, A.N. Kulkarni and S.S. Bhutkar, Department of Animal Husbandry and Dairy Science, College of Agriculture, PARBHANI (M.S.) INDIA