



ORIGINAL RESEARCH PAPER

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EFFECT OF ALPHAIMMUNE (A HERBAL SUPPLIMENT) ON THE PERFORMANCE OF BROILERS

KEY WORDS:

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INTRODUCTION

Stress affects the normal immune as well as endocrine system of the birds. It has also been opinioned that in stress conditions there is excessive release of catecholamines which stimulate the activity of muscles and increase glycogenolysis (Blood *et al.*, 1979). These results in loss of productivity of the birds. A commercial herbal preparation ALPHAIMMUNE produced by Alphafacts Health Solution BVBA was evaluated for its efficacy as an antistress agent in broilers. Hence to check its efficacy a study was planned in broilers under area of veterinary Hospital Chhata, Mathura, Uttar Pradesh, India.

MATERIAL AND METHOD

A total of 100 one day old sexed commercial broiler chicks comprising of 50:50 male and female, were procured. These birds were divided randomly into five groups of 20 each in equal sex ratio. Each group was again divided randomly into four replicated groups of five birds each. All the birds were fed ad. lib. with a commercially available broiler starter and finisher rations. Group A was kept as healthy control group and was not exposed to any stress conditions whereas the other groups viz. B, C, D and E were exposed to several stress conditions like vaccination, debeaking, excitation, deworming, overcrowding and disease. For vaccination stress, the chicks were vaccinated with Marek's disease vaccine at day-old age, followed by F1 vaccine of Ranikhet disease on 6th day and again 6th week of age. Debeaking of these birds was done at 6th week of age. They were also disturbed by touching with hands twice daily from 3rd week onwards for excitation stress. The birds of these four groups (B,C,D, &E) were kept in overcrowding conditions (half the normal space). Deworming stress was induced in them by administering piperazine citrate in drinking water at the usual dose level once on 40th day. For producing disease stress in the chicks of these four groups, caecal coccidiosis was produced in them by inoculating 20,000 sporulated oocysts of *Eimeria tenella* to each bird at 4th week of age. The oocytetes were collected from the birds suffering from caecal coccidiosis. These birds were however, treated with an anticoccidial drug for 5 days, from two days onwards after the infection was given.

The second group (B) was kept as untreated control group while the birds of the other three stressed groups (C, D and E) were treated with ALPHAIMMUNE from day 1 to 49 @ 4, 5 and 6 gm per 100 birds respectively daily in Feed for initial 21 days and then medicated with the double dosage respectively for the subsequent 28 days.

Body weights of each chick were recorded before and after the end of the experiment. Feed consumption in each replicate of each group was also recorded. Weight gain and feed efficiency of each group were then calculated. Mortality, if any, was recorded and postmortem examination was conducted. The data was statistically analysed (Snedecor and Cochran (1980).

RESULT AND DISCUSSION

Significant variation in body wt. between different groups was observed (table 1). Similarly, there was significant variation (P<0.01) in wt. gain between the groups. There was a marked decrease in weight gain in group B in comparison to blank control group A which may be due to different stress conditions induced. The treated groups (C, D and E) showed improvements in weight gain in comparison to Gr.B. Brekhman and Dardymov (1969) demonstrated that certain plant extracts possess adaptogenic (anti-stress) activity by inducing a state of non-specific increased

resistance in animals and man.

The herbal ingredients of ALPHAIMMUNE viz. Tarbuz giri: contains l-carvone which keeps the body cool from inside and keep body immune towards the environment. *Aegle marmeloes*, *Ocimum sanctum*, *Centella asiatica*, are reported to possess anti-stress, adaptogenic properties (Bhargava and Singh, 1981; Bhattacharya *et al.*, 1987). Bhargava and Singh (1981) also reported that the extract of *Ocimum sanctum* possesses a good antistress through its cortisol sparing effect during stress. Further they opined that it induces a non-specific resistance against a variety of stress induced biological changes in animals, act as good adaptogenic agents for birds. Better performance in weight gain were noticed in group D and E in comparison to group C which suggested that ALPHAIMMUNE in higher dose levels combats the stress conditions more effectively than in lower dose level. Three birds of group B and one bird of group C, died in the 4th week of age which appeared pale and emaciated on post-mortem examination.

The feed intake in group A was significantly (p<1) higher than in other groups. However, there was no significant variation in feed conversion ratio amongst groups. The increased feed efficiency in group B, suggested poor feed utilization during stress, while improved feed efficiency in groups C and D and E given ALPHAIMMUNE suggested better feed utilization. Within the limited scope of this experiment, it was, thus, concluded that ALPHAIMMUNE has a good antistress effect on the performance of broilers.

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Table 1. Effect of ALPHAIMMUNE on the weight gain and feed efficiency of broilers.

Group	7 th Week body wt.(g)	Weight gain(g)	Feed intake(g)	Feed conversion ratio
A	1557.58 ^a 23.69	1520.79 ^a 30.57	3391.36 ^a 38.72	2.23 0.06
B	1284.82 ^b 25.92	1248.39 ^b 29.71	3071.04 ^b 56.10	2.46 0.05
C	1336.94 ^c 28.80	1298.83 ^c 23.11	3104.20 ^b 29.78	2.39 0.05
D	1429.01 ^d 19.49	1391.75 ^d 28.80	3201.02 ^c 36.16	2.30 0.04
E	1449.36 ^e 30.19	1412.19 ^e 20.52	3233.91 ^c 40.33	2.29 0.03

Means with different superscripts differ significantly (P0.01)

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