

Immunomodulatory Potential of PHYTOCEE® in Poultry : Effect on Serum Neopterin and H:L Ratio

OBJECTIVE

To evaluate the immunomodulatory effects of PHYTOCEE® in broiler chicken.

MATERIALS AND METHODS

The trial was conducted in two experimental sets.

Experiment 1: A total of 360 one-day-old broiler chicks were randomly assigned to three groups viz. G1: Normal control (NC), G2: Heat stress control (HSC), and G3: PHYTOCEE® treatment group (G2+ PHYTOCEE®, 200 g/ton). Effect of PHYTOCEE® on serum neopterin level was assessed.

Experiment 2: A total of 600-day old broiler chicks were randomly assigned to four groups viz. G1: Normal control (NC), G2: Heat stress control (HSC), and G3: Positive Control (Vitamin C, 100 g/ton), and G4: PHYTOCEE® treatment group (PHYTOCEE®, 100 g/ton). Effect of PHYTOCEE® on H:L ratio was assessed. The birds in G2 & G3 in Experiment 1 and G2, G3 & G4 in Experiment 2 were subjected to heat stress (32°C–36°C) from 9:00 a.m. to 5:00 p.m. for 35 days.

RESULTS

Effect of PHYTOCEE® on serum neopterin levels

Parameters	Time	G1-NC	G2-HSC	G3-HSC + PHYTOCEE®
Neopterin (nmol/l)	Day 42	7.23 ± 1.73	***3.83 ± 0.50	7.22 ± 1.14

Values are expressed as Mean ± SEM; ***p<0.001 as compared to Heat stress control based on one-way ANOVA with location as a blocking factor followed by Dunnett's multiple comparison post-hoc test using SPSS

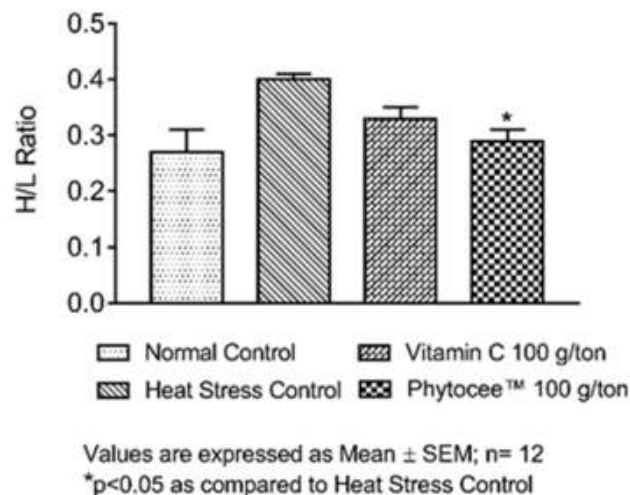


Figure: Effect of PHYTOCEE® on H:L ratio

CONCLUSIONS

Supplementation of PHYTOCEE® demonstrated significant immunomodulatory effects through restoration of serum neopterin levels and H:L ratio.

OUTCOME

Hence, PHYTOCEE® could be used as a natural adaptogen to mitigate the negative effects of various stressors in broiler chickens.