

Effect of Supplementation of Rough Lemon Juice, Amla Juice and Aloe Vera Gel on Physio-biochemical and Hematological Parameters of Broiler Chicken During Summer Season

Authors : Suraj Amrutkar, R. Gowri, Asma Khan, Nazam Khan, Vikas Mahajan, Manpreet Kour And Bharti Deshmukh

Abstract : Herbal additives are rich in vitamin C, A and other biological active compounds and may act as surrogate source to subdue heat stress in chicken. Among various herbal additives such as rough lemon (*Citrus Jambhiri Lush*) juice, amla (*Emblica officinalis*) juice and aloe vera (*Aloe barbadensis miller*) gel are easily available during summer (stress period) and also cost less as comparison to synthetic feed additives in market. In order to analyze the performance by supplementation of rough lemon juice, amla juice and aloe vera gel in broiler under heat stress conditions. Study was carried out with a random distribution of day old straight run chicks (240 No.) in to four treatment group (n=60) was done. All the groups were given basal diet (Maize-Soya based; T0) was same for all the groups with supplementation of rough lemon juice (T1), amla juice (T2) and aloe vera (T3) @ 2% in drinking water. Experiment trial lasted for 42 days during heat stress period (June-July) with minimum THI (78.2) and Maximum THI (88.02). Feed and water were offered ad-libitum throughout the trial. Results revealed significantly higher ($P<0.05$) body weight in T3 and T2, followed by T1 and least in T0 at 42 days of age. The overall mean of Feed conversion ratio of various treatment T0, T1, T2 and T3 were 2.16, 1.98, 1.89 and 1.82, respectively. The mortality percentage in various treatment, T0, T1, T2 and T3, were 6.67, 3.33, 0.0 and 1.67, respectively. pH value, PCV (%), Sodium (mmol/L) and Potassium (mmol/L) was higher in T3 than rest of the groups. HL ratio is significantly lower ($P<0.05$) in T3, T2 followed by T1 than T0 at 42 days of age. It may be inferred that amongst these phyto-additives, aloe vera leads in alleviating heat stress in broiler in an economical way, followed by amla and rough lemon.

Keywords : rough lemon, amla, aloe vera, heat stress, broiler

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