

Effect of Different Level of Pomegranate Molasses on Performance, Egg Quality Trait, Serological and Hematological Parameters in Older Laying Hens

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Abstract : The current study was planned with the objective to explore the potential of pomegranate molasses (PM) on performance, egg quality and blood parameters in older laying hens. A total of 240 Babcock white laying hens (52 weeks old) were divided into 5 groups (n=48) with 8 subgroups having 6 hens in each. Pomegranate molasses was added in the drinking water to experimental groups with 0 %, 0.1%, 0.25 %, 0.5%, and 1%, respectively during one month. In our results, egg weight values were remained the same in all pomegranate molasses supplemented groups except 1% group over control. However, feed consumption, egg production, feed conversion ratio (FCR), egg mass, egg yolk cholesterol, body weights, and water consumption remained unaffected ($P > 0.05$). During mid-study (15 Days) analyses, egg quality parameters such as Haugh unit, eggshell thickness, albumin index, yolk index, and egg yolk color were remained non-significant ($P > 0.05$) while after final (30 Days) egg analyses, only egg yolk color had positively ($P < 0.05$) increased in 0.5% group. Moreover, Haugh unit, eggshell thickness, and albumin index were not significantly ($P > 0.05$) affected by the supplementation of pomegranate molasses. Regarding serological parameters, pomegranate molasses did not show any positive effect on cholesterol, total protein, LDL, HDL, GGT, AST, ALT, and glucose level. Similarly, pomegranate molasses also showed non-significant ($P > 0.05$) results on different blood parameters such as HCT, RBC, MCV, MCH, MCHC, PLT, RDWC, MPV except hemoglobin level. Only hemoglobin level was increased in all experimental groups over control showing that pomegranate molasses can be used as an enhancer in animals with low hemoglobin level.

Keywords : pomegranate molasses, laying hen, egg yield, blood parameters

Conference Title : ICMAN 2020 : International Conference on Monogastric Animal Nutrition

Conference Location : Lisbon, Portugal

Conference Dates : February 06-07, 2020