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Effect of Probiotic and Prebiotic on Performance, Some Blood Parameters, and Intestine Morphology of Laying Hens

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Abstract : In this experiment, sixty Hy-Line (W-36) laying hens were selected in 40weeks of age. Experimental diets were consumed for 12 weeks duration by them. The experimental design was completely randomized block included four treatments and each of them with five replications and three sample in each replicate. Treatments were as follow: Basal diet+probiotic, basal diet + prebiotic and basal diet+probiotic+ prebiotic. Performance traits were measured such as: hen production, egg weight, feed intake, feed conversion ratio ,shell thickness, shell strength, shell weight, hough unit, yolk color, and yolk cholesterol. Blood parameters like; Ca, cholesterol, triglyceride, VLDL and antibody titer and so morphological of intestine were determined. At the end of experimental period, after sampling from end of cecum, bacterial colony count was measured. Results showed; shell weight was significantly greater than other treatments in probiotic treatment.Yolk weight in prebiotic treatment was significantly greater than other treatments. The ratio of height of villi to dept of crypt cells in duodenum, jejunum, ileum and secum in prebiotic treatment were significantly greater. Results from the other traits were not significant between treatments, however there were totally good results in other traits with simultaneous usage of probiotic and prebiotic.

Keywords : probiotic, prebiotic, laying hens, performance, blood parameters, intestine morphology
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