

Effect of Dietary Energy on Performance, Egg Components, Egg Solids, Egg Quality and Profits in Seven Commercial Leghorn Strains During Second Cycle Phase Two

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Abstract :

This study was a 3 X 7 factorial arrangement with three dietary energy levels (low, medium and high) and seven commercial Leghorn strains. The objective of this experiment was to determine the effect of increasing dietary energy on performance, egg composition, egg solids, egg quality, and profits in seven commercial Leghorn strains during second cycle phase 2 (from 88 to 97 week of age). This experiment lasted 10 weeks. Seven strains of hens (n=245 of each strain) at 88 week of age were randomly divided into 21 treatments (6 replicates of 15 birds per treatment). Strain had a significant effect on feed intake, egg production, egg specific gravity, egg weight, percent whole egg solids, and haugh unit. There were no interactions between strain and dietary energy on any parameters during second cycle phase 2 (88 to 97 weeks of age). Dietary energy had no significant effect on any parameter. However as dietary energy increased, egg production, final body weight of hens, egg mass, egg yolk color and egg yolk weight numerically increased; moreover feed conversion numerically improved from 2.06 to 2.02, resulting in a 1.94% improvement of feed conversion. It is difficult to determine an ideal dietary energy level for the hens in second cycle phase 2 because increasing dietary energy had no significant effect on feed intake, egg mass and feed conversion. Because feed ingredient and egg price vary, there can be no fixed ideal dietary energy requirement for optimal profits.

Key Word :

Strains, nutrient density, dietary energy, lysine

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