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Effects of treatment methods on the nutritional value of cotton seed cake for laying hens

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ABSTRACT

The effects of treatment methods on the nutritive value of cotton seed cake (CSC) for laying hens were examined. Olympia laying hens (n = 96) were assigned randomly to a 2 × 3 factorial combination of fermented or unfermented CSC supplemented with enzyme, Vitamin E and ferrous sulphate over a 4-week feeding period. CSC was incorporated at 15% in the diets. Results showed no significant differences (P > 0.05) in feed intake, body weight gain and egg weight due to treatments. However, hen-day egg production was significantly reduced (P < 0.05) among dietary treatments compared with the control. Layers fed on unfermented CSC + Vitamin E and unfermented CSC + FeSO₄ had the lowest (P < 0.05) values for packed cell volume and haemoglobin. Treatment differences in red blood cell and white blood cell were not significant (P > 0.05). Serum concentration of total protein among dietary treatments was lower (P < 0.05) than the control, while albumin and cholesterol values were similar (P > 0.05) for all treatments. Generally, activities of alanine and aspartate aminotransferases increased (P < 0.05) among CSC dietary treatments compared with the control diet. The interaction between CSC form and additives had no significant effect on any of the parameters. The results of this study indicate that the treatment methods employed for CSC could not significantly improve its nutritive value for egg production at 15% level in the diet of laying hen.

KEYWORDS

Cotton Seed Cake; Haematology;

Cite this paper

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