Apparent digestibility of Rhode island red hens' diets containing Leucaena leucocephala and Moringa oleifera leaf meals.

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Abstract:

This study consisted of two trials aimed to evaluate the dietary digestibility by Rhode Island Red (RIR) hens' fed on different levels of Leucaena leucocephala (LLM) or Moringa oleifera (MOLM). In each experiment, thirty six Rhode Island Red hens at 36 weeks of age were randomly divided into four groups each of nine birds which were allocated in individual cages. The four groups were corresponded to four dietary treatments containing 0 (control), 5, 10 and 15 % of LLM (Exp 1) or MOLM (Exp 2). All groups received smashed diets containing similar metabolizable energy and crude protein (16% CP and 2900 kcal ME/kg diet, as fed basis). The hens were fed the experimental diets for six weeks and during the last four days, feed intake was individually recorded every day and excreta was totally collected twice daily and weighed individually. Considerable amounts of CP were found in LLM (23.61% DM) and MOLM (19.76% DM). The dietary treatments had no significant effect on the intake of dry matter (DM), organic matter (OM), gross energy (GE), crude protein (CP) or neutral detergent fiber (NDF) in both experiments, while the acid detergent fiber (ADF) intake increased linearly with the increase of LLM and MOLM levels. The apparent digestibility of DM, CP, ADF, and OM decreased linearly with the increase of LLM and MOLM levels. The apparent digestibility of gross energy decreased linearly in LLM experiment, while it was not affected in MOLM experiment. LLM and MOLM could be recommended for RIR hens between 5 and 10% of the diet.

Keywords:

Digestibility; nutrients intake; forages; hens; Leucaena leucocephala; Moringa oleifera

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