Utilization of Treated Mangrof Leaves Meal in Pullet Diets and its Effect on Subsequent Hens Performance

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Abstract: This work aimed to improve the nutritive value of mangrof leaves meal by cooking for 30 minutes or by supplementing either biogen or spices mixture e.g. Cardamom, Cumin, Hot and Black Pepper. The effects of feeding this meal on the productive performance during pullets development (8-20 wks of age) and laying hens periods (21-28 wks of age) were determined. Four hundred and fifty 8-week old Hy-line egg strain female chicks were randomly divided into 15 dietary treatments in 5 replicates each of 6 birds. Each group during the studied periods was fed one of the 5 experimental diets without or with either biogen or spices mixture. Growth performance and nutrient digestibility during the pullet period (8-20 wks of age), while age at sexual maturity, egg production traits and the changes in body weight, ovary and oviduct, spleen and liver weight studies during the laying period (21-28 wks of age) were studied. Results obtained showed that the proximate analysis of mangrof leaves meal showed that it contains reasonable amounts of protein and nitrogen free extract as well as relatively high amount of fiber. Boiling process tends to improve the mangrof meal content of protein and decrease its content of ash and some of the anti-nutritional factors such as tannins. Improved feed conversion was associated with increased feed intake which contributed to the tendency of increase in body weight. Cooking treatment significantly increased pullets growth gain and improved feed conversion ratio, whereas feed intake and the number of dead pullets were not affected. Although, either Biogen or spices mixture had no enhancing effect on growth gain, feed intake and feed conversion rate tended to improve. Increasing inclusion level of mangrof meal up to 10% significantly decreased laying rate, egg mass and impaired feed conversion. The opposite was true with 5% of the tested material since it imposed less effect. Neither boiling process nor either studied feed additives (biogen and spices mixture) had enhancing effect on most of the studied parameters of laying hens performance. It may be concluded that pullets can tolerate cooked mangrof leaves meal at level 5% alone or 10% with Biogen supplementation to achieve comparable feed conversion to that of the control. Along the same line, laying hens can tolerate this tested material at level 5% alone without adversely affecting the layer performance.

Key words: Mangrof leaves, egg production, Biogen supplementation