Journal of Animal & Plant Sciences (J.Anim.Plant Sci. ISSN 2071-7024
Vol.46 (1): 8100-8112 https://doi.org/10.35759/JAnmPlSci.v46-1.4

Growth performances of broiler chickens fed on molasses enriched cassava fibre based-diet supplemented with enzymes

Tchouan Deffo Gilchrist[1]*, Ngouana Tadjong Ruben[2], Kana Jean Raphaël[1], Ebile Dayan Agwah[1], Teufack Sévérin[1], Kengni Noubissie Guyssela Josiane[1], Nzoualah Toumbou Guilaine[1], Necdem Tsafack Boris[1,] Tindo Tsamene Romario Kodel[1] and Akawo Aghanie[1]

1. Department of Animal Science, Faculty of Agronomy and Agricultural Sciences, Laboratory of Animal Nutrition, University of Dschang, BP: 70 Dschang, Cameroun.

2. Institute of fisheries and aquatic science of Yabassi, Aquaculture Department, Laboratory of Aquaculture and Demography of Fisheries Resources, University of Douala, Douala Cameroon.

**Corresponding author, E-mail: gilchrist.tchouan@yahoo.fr ;*

Tel: (+237) 695098279/678896547

Key words: Broilers, cassava fibre, fibrolytic enzyme, growth performances, molasses.

Publication date 31/10/2020, http://m.elewa.org/Journals/about-japs/

1 ABSTRACT

This study was designed to evaluate the effects of molasses enriched cassava fibre based-diet supplemented with fibrolytic enzymes on growth performances of broilers. Chicks were fed for 07 weeks on feed in which 50% of maize was substituted with cassava fibre enriched with molasses and supplemented with enzyme. These chicks were, compared to chicks fed on the control ration without cassava fibre and any supplement. From day 49, faeces were collected for 3 consecutive days to evaluate the digestibility of feed components. The results showed that the ration supplemented with enzyme ($R_{50}E$) induced the highest digestibility of organic matter, nitrogen, NDF and crude fibre. The highest ($p<0.05$) live weight and weight gain was recorded with the same ration. While, the inclusion of 2% molasses ($R_{50}M_2$) decreased ($p<0.05$) weight gain and live weight. No significant effect was observed between treatment groups for feed intake and feed conversion ratio. The cost of production of live weight decreased significantly ($p<0.05$) with cassava fibre in the ration compared to the control treatment. No significant ($p>0.05$) difference was recorded between treatment groups for carcass characteristics, digestive organs and hematological parameters, except for the length of the intestine and blood platelets that increased ($p<0.05$) with enzyme ($R_{50}E$) and molasses supplemented with enzyme ($R_{50}M_2E$) respectively. The serum content in ALT, urea, total cholesterol and LDL-cholesterol decreased while total protein and HDL-cholesterol increased with the inclusion of enzyme in the ration. The ration enriched with molasses increased LDL-cholesterol and decreased serum content in creatinine and total protein. It was concluded that fibrolytic enzymes improve digestion of cassava fibre based-feed, growth performance and reduce the cost of production of broilers.