

Assessment of microbial profile of selected proprietary broiler chicken feeds sold in Abeokuta, South-West, Nigeria

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Abstract

The growth in poultry industry has resulted in heavy dependence on finished feeds supplied by feed millers, the quality of which determines the profit margin of the farmers. Presence of pathogenic and toxigenic microbes, however, tends to deplete the nutritive value of poultry diets. This study, therefore, focused on assessing the incidence and concentration of micro-organisms in five selected brands of proprietary broiler feeds sold in Abeokuta, South-West, Nigeria. None of the feed samples investigated was devoid of pathogenic and toxigenic pathogens of public health concern. Bacterial and fungal isolates recovered include *Escherichia coli*, *Staphylococcus albus*, *Bacillus subtilis*, *Micrococcus* spp, *Pseudomonas* spp, *Aspergillus fumigatus*, *A. flavus*, *A. niger*, *Fusarium* spp, *Mucor* spp, and *Penicillium notatum*. Total microbial counts were significantly different ($P < 0.05$) among the selected feed brands for both Broiler Starter and Finisher diets. Occurrence and high level of pathogenic microbes observed in this study indicated that quality of finished feeds offered to broilers chickens could predispose them to health hazard with resultant economic loss. Strategies to improve the shelf life of commercial finished feeds, such as inclusion of toxin binders, are hereby advocated.

Keywords: Broiler, Feeds, Quality control, Bacteria, Fungi, Mycotoxins

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Target audience: Nutritionists, Feed producers, Farmers, Distributors / Sales outlets, Extension agents

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