

Improving nutritional values of palm kernel cake (PKC) as poultry feeds: a review

ABSTRACT

Palm Kernel Cake (PKC) is a by-product of palm kernel oil extraction and provides moderate nutrition with approximately 16-18% of crude protein (CP) and 13-20% crude fiber (CF). Usage of PKC is common in ruminant diets, but limited in the non-ruminant diets especially in poultry diets due to the high fiber content of PKC. Numerous works have been conducted to increase the nutritional contents of PKC as one of the measures to reduce and/or eliminate the constraints of utilizing PKC in poultry diets. The method used to achieve this target is either through physical, chemical, biological or combination of these treatments. However, only chemical and biological treatments of PKC seem to improve the nutrient values of PKC. Recent works cite solid-state fermentation (SSF) using fungi to increase the nutrient values of PKC. This method is considered as the most suitable treatment for PKC. Through solid-state cultures of PKC, the concentration of CP has increased while the CF has decreased. Furthermore, this method is considered practical because the whole end product will be utilized for animal feeds. Hence, emphasis should be given to improve nutritional values of PKC in order to reduce feeding cost of poultry.

Keyword: Nutritional value; Palm kernel cake; Palm kernel expeller; Palm kernel meal; Poultry feeds