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The Effect of Mannanolytic Fungi and Humic Acid Dosage to Improve the Nutrient Content and Quality of Fermented Palm Kernel Cake

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Abstract: An experiment was conducted to understand the effect of mannanolytic fungi and dosage of humic acid to improve the nutrient content and quality of fermented palm kernel cake (PKC). The experiment used completely randomized design (CRD) with 2 x 3 factorial and 3 replications. The first factor was two kinds of mannanolytic fungi: (1) *Sclerotium rolfsii* (2) *Eupenicillium javanicum*. The second factor was dosage of humic acid: (1) 100 ppm (2) 200 ppm (3) 300 ppm. The parameters were Crude Protein, Nitrogen Retention, Crude Fiber and Digestibility of Crude Fiber of fermented palm kernel cake. The result of study showed that there was highly significant interaction between mannanolytic fungi and dosage of humic acid ($P < 0.01$), also types of fungi and dosage of humic acid had significant ($P < 0.01$) effect to crude protein, nitrogen retention, crude fiber and digestibility of crude fiber of fermented palm kernel cake. The conclusion was fermented palm kernel cake by *Sclerotium rolfsii* and dosage of humic acid 200 ppm had better nutrient content and quality than other treatments. This condition can be seen in crude protein (27,43%), nitrogen retention (59.17%), crude fiber (11,53%) and digestibility of crude fiber (55,40%) of fermented palm kernel cake.

Key words: Mannanolytic Fungi, Humic acid, Nutrient, Fermented, Palm kernel cake.