Application of Fermented Palm Kernel Cake and Cassava Byproduct Mixture in Broiler

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ABSTRACT

This experiment was conducted to evaluate the effect of feeding PKC-cassava byproduct mixture fermented by *Aspergillus niger* in ration on broiler performance. This research used 96 DOC broiler. The birds were reared in litter floor pen and were fed 0 (P0), 10 (P1), 20 (P2), and 30% (P3) of the fermented PKC-cassava byproduct mixture in the ration. Feed and water were given *ad libitum* and reared for 6 weeks. The experiment used Completely Randomized Design with 4 ration treatments and 4 replications and each replication consisted of 6 birds. Data were analyzed statistically using ANOVA and continued with Duncan's Multiple Range Test. The result showed that diet treatments did not affect ration consumption, gain, ration conversion, carcass percentage, meat crude fat, and blood cholesterol, but affected abdominal fat percentage, and IOFC. Utilization of fermented PKC-cassava byproduct mixture untill 30% in the ration was comparable with the control diet.

Key words: palm kernel cake, cassava waste, fermentation, broiler

INTRODUCTION

The usage of fermentation product in broiler ration is predicted to increase the ration palatability and final weight, and it can decrease body fat. Evaluation on nutrient ingredient of many composition of palm kernel cake (PKC)-cassava byproduct mixture fermented by *Aspergillus niger* was investigated by Nurhayati (2007). The result indicated that composition of PKC 60% and cassava byproduct 40% was the best mixture in nutrition value compared with the other composition (100% PKC, 80% PKC : 20% cassava byproduct, 60% PKC : 40% cassava byproduct, 40% PKC:60% cassava byproduct, 20% PKC:80% cassava byproduct, and 100% cassava byproduct). It could be proved by increasing of crude protein from 10,75% to 18,61% an by decreasing crude fiber and ex tract ether i.e. from 16,92% to 8,07% and from 10,13% to 2,39% respectively.

It is important to apply this fermentation product in broiler to investigate boilogical effect. The objective of this research was to evaluate the effect of feeding PKC-cassava byproduct mixture (60% PKC and 40% cassava byproduct) fermented by *Aspergillus niger* in ration on broiler performance.

MATERIALS AND METHODS

Ninety six Day Old Chick of broiler were used in this research. Ration formulation used and its nutrient content were presented in Table 1 and Table 2.

Table 1. Trial ration formulation for starter and finisher period

Feedstuff	Starter (%)				Finisher (%)			
	P0	P1	P2	P3	P0	P1	P2	P3
Consentrate*)	43	40	37	34	35	32	29	26
Corn mill[1)]	57	50	43	36	52.5	45.5	38.5	31.5
Rice bran[1)]	0	0	0	0	10	10	10	10
Fermentation product	0	10	20	30	0	10	20	30
Palm oil	0	0	0	0	2.5	2.5	2.5	2.5
Total	100	100	100	100	100	100	100	100

Note: P0, P1, P2, and P3 = Diet with 0%, 10%, 20%, and 30% of fermentation product in the ration; *) Based on nutrient analysis of animal feedstuff factory (CP 40%; ME 2,974 ccal; EE 3%; CF 5%; Ca 2.5%; P 1.2%); 1) Wahyu (1992).