

Replacing fermented rumen content flour as rice substitution: effects on broilers performance

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Abstract

This experiment was planned to make benefit of rumen content flour when fermented by probiotic as rice bran substitution on broiler performance. The measured parameters were feed consumption, the body weight gain and feed conversion. The experimental animals were 28 DOC, Cobb strain. The research design used was a completely randomized design with four treatments and seven replications. Four treatment groups were, P0 was based ration 0% rumen content flour of total feed; P1 was 10% rumen content flour of total feed; P2 was 20% rumen content flour of total feed; P3 was 30% rumen content flour of total feed. The experimental diets were fed for two weeks in finisher period. The result indicated that there were no significantly differences ($P>0.05$) on the feed consumption, the body weight gain and feed conversion.

Keywords: Rumen content flour; probiotics; rice bran; performance

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Introduction

Crude fibre of rumen content flour is 34.68% which contains 9.13% crude protein (Soepranian-ondo, 2006). Livestock feed which contains high crude fibre and low crude protein cause low productivity of broiler so it needs further processing. One method is fermentation process using probiotic as a fermentor (Rachmawan, 2001). The aim is to decrease crude fibre and increase crude protein so that probiotic fermented rumen content flour may be used as feed substitutions (Soepranian-ondo, 2009). This research was carried out to use rumen contents, fermented with probiotic in broiler feed as rice substitution.

Materials and Methods

This research was conducted in Islamic Azad University, Chaloos Branch for 7 weeks. Twenty eight day old (DOC) Cobb 500 broilers were divided into four treatments. Standard commercial feed and water were

provided with free access. One group served as a control while the other groups were supplemented with rumen contents plus probiotics at the rate of 10, 20 and 30%.

The parameters of broiler performance include feed consumption rate, weight gain and feed conversion rate done in finisher phase (5th week). The data was analyzed with analysis of variance using SPSS (Statistic Product and Service Solution) program 19.0 for Windows.

Results and Discussion

The feed consumption, weight gain and feed conversion ratio of broilers during the finishing stage is given in Table 2-4. No significant difference was found between the control and treated groups.

Tillman et al. (1991) and Anggorodi (1995) declared that feed with balanced composition of protein, mineral and vitamin will results in broiler with similar weight in spite of feed given contains different level of metabolism energy.

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Table 1: Feed composition of broilers during finisher Phase

Feed Material	P0 (kg)	P1 (kg)	P2 (kg)	P3 (kg)
Corn	40	40	40	40
Rumen Content Flour + Probiotic 6%	0	10	20	30
Rice Bran	30	20	10	0
Others	30	30	30	30
Total	100	100	100	100

Table 2: Mean±SD feed consumption of broiler during finishing stage

Treatments	Feed consumption (g)
P0	1987.14±123.74
P1	1753.00±230.80
P2	1855.14±119.54
P3	1771.00±162.46

Table 3: Mean±SD weight gain of broilers during finishing stage

Treatments	Weight gain (g)
P0	951.00±113.93
P1	808.00±157.16
P2	841.00±91.49
P3	785.00±158.75

Table 4: Mean±SD feed conversion ratio of broilers during finishing stage

Treatments	Feed conversion ratio
P0	2.10±0.20
P1	2.19±0.20
P2	2.21±0.18
P3	2.32±0.45

Conclusion

Based on the result of the research, it may be concluded that the combination of probiotics and rumen contents did not affect the growth performance of broiler chicks.

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