

Thesis title UTILIZATION OF FERMENTED HEN MANURE WITH LACTIC
ACID BACTERIA FOR BROILER FEED

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Abstract

This study was carried out to evaluate the utilization of fermented hen manure with Lactic acid bacteria, the composition was 60% hen manure, 25% rice bran, 2% soybean meal, 13% water by weight and 1% Lactic acid bacteria inoculum, for broiler feeding and to find out maximal proportion of fermented hen manure in broiler rations to avoid deleterious effect on production performance and mortality rate, meanwhile develop broiler feedstuff at lower cost.

Experiments were conducted using fermented hen manure

supplement in broiler ration. A group of 540 broiler chicks were used in a complete randomized design using 6 treatments with 3 replications and 30 chicks for each treatment. The ration of 6 treatments contain 0% (the control), 5%, 10%, 15%, 20% fermented hen manure and 10% dried hen manure. Trials were carried out on chicks from one day to 7 weeks of age. Feed and water were given ad libitum.

The finding indicated that every treatment of 0-3 weeks old chick fed with fermented hen manure resulted in a significant decrease in body weight gain and feed conversion rate than the control but no significant difference ($p < 0.05$) in feed conversion rate between the treatment fed with 5% fermented hen manure and the control. When the age of the broiler was 3-6 weeks, 6-7 weeks and 3-7 weeks, the fermented hen manure could be used beneficially at 20% level with no significant difference ($P < 0.05$) in body weight gain and feed conversion rate from the control, moreover, the body weight gain at every treatment fed with fermented hen manure (5%, 10%, 15% and 20%) was higher than the control 4.4%, 3.3%, 5.7% and 4.2% at 3-6 weeks and 3.3%, 0.3%, 0.4% and 0.8% at 3-7 weeks, respectively. In this study, it was found that 20% fermented hen manure supplement was more effective on body weight gain than 10% dried manure supplement in 7 weeks of age. There was no significant difference in mortality rate throughout the experiment and no disease and danger affecting the health of broilers was found.

The cost of fermented hen manure was 3.85 Bath per kilogram (calculated from small scale production). When it was supplement in the rations, the fermented hen manure could be used to reduce cost of rations per body weight gain 1 kg. At 3-6 weeks, the cost of rations per body weight gain 1 kg. of the treatment fed with 5%, 10%, 15% and 20% fermented hen manure were less than the control 0.66, 0.53, 0.70 and 0.33 Baht, respectively. For the age of 3-7 , 0-6 and 0-7 weeks, the cost of rations per body weight gain 1 kg. of the treatment fed with 5% fermented hen manure supplement could be reduced by 0.43, 0.12 and 0.08 Baht, respectively.

The evidence suggested that the 15% fermented hen manure could be used well for broiler feeding at 3-6 and 3-7 weeks. However, it could also be used for feeding at the first period (0-3 weeks) when the metabolizable energy in the rations of this period were be balanced according to the requirement of broiler.