

ABSTRACT

Hidayah, Alfi. 2014. **The Effect of *Bacillus mycooides*-fermented Tapioca by Products (Onggok) Addition to the Feed on Production Performance of Broiler.** Thesis. Department of Biology, Faculty of Science and Technology. Advisors: Dr. Hj. Ulfa Utami, M. Si and Dr. H. Ahmad Barizi, M. A

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Broiler is one of livestock animals commonly cultivated by Indonesian. The demand for broiler meat as animal protein keeps increasing along with population. Qualified feed supply becomes an urgent factor in the success of broiler husbandry. Unfortunately, it faces some obstacles due to increasing price of feed. Alternatively, one thing can be done is addition of efficient and economic feed. Due to its overflow availability, onggok made from tapioca processing waste may become an alternative feed, although it has low nutrient value, where this crude protein percentage is 1.33-1.88%, and 15.52-15.62% for high crude protein. It is expected that the use of *Bacillus mycooides* as inoculum in fermentation may increase nutrient value of onggok and may be used as raw feedstuffs for broiler husbandry. The study aims to find out the effect of *Bacillus mycooides*-fermented onggok addition to the feed at different concentration on production performance of broiler.

The study utilizes 32 broiler strain Ross from PT Charoen Pokphand Jaya Farma at one day of age (DOC), and they are raised up to 35 days of age. Design applied herein is completely randomized design by 4 treatments and 4 repetitions where every repetition has 2 broilers. Treatments consist of T0 (controlled feed/no fermented-onggok), T1 (feed by 10% fermented-onggok), T2 (feed by 20% fermented-onggok) and T3 (feed by 30% fermented-onggok). Observed variables are feed consumption, liveweight gain, feed conversion and percentage of carcass. Data is analyzed by one-way ANOVA, and if there are found real difference, data will be analyzed by the smallest real difference (SRD) by 5%.

The findings indicate that *Bacillus mycooides*-fermented onggok addition to the feed by has real effect (F count $>$ F table) in decreasing feed consumption and liveweight gain. Average feed consumption are 3609.50 g/broiler (T0), 3517.25 g/broiler (T1), 3378.75 g/broiler (T2) and 3304.75 g/broiler (T3). Average liveweight gain are 437.35 g/broiler/week (T0), 418.1 g/broiler/week (T1), 386.8 g/broiler/week (T2) and 382.3 g/broiler/week (T3). *Bacillus mycooides*-fermented onggok addition to the feed does not affect feed conversion and percentage of broiler carcass (F count $<$ F table). Average feed conversion are 1.59 (T0), 1.63 (T1), 1.65 (T2) and 1.63 (T3). Average carcass percentage are 69.66% (T0), 69.57% (T1), 65.8% (T2) and 65.39% (T3). The findings prove that substitution between concentrate and fermented-onggok up to 30% works to maintain production performance of broiler, i.e. in parameter on feed conversion and carcass percentage.