

Waraphan Jintanawit 2003: Effect of Substitution of Cassava Meal for Broken Rice in Diet on Production Performance Meat Quality and Population of Microorganism in Digestive Tract of Meat Ducks. Master of Science (Agriculture), Major Field: Animal Science, Department of Animal Science. Thesis Advisor: Associate Professor Uthai Kanto, M.S. 65 pages.

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The effects of substitution of cassava meal for broken rice in Muscovy (Barbary) meat ducks were studied by using randomized completely block design (RCBD) experimental design with a total 432 day-old ducklings. The animals were composed of an equal number of males and females and were divided into 3 groups which containing 6 subgroups of 12 animals each for each sex of the animals. Each group of the duckling was randomly fed ad libitum one of the experimental diet as follows until age 14 weeks for males ducks and 12 weeks for females ducks. Diet 1: A control broken rice diet, Diet 2: Diet 1 but broken rice was 100 % replaced by cassava meal, and Diet 3: Diet 1 but 50 % of broken rice was replaced by cassava meal. The results have shown that weight gained of ducks on cassava diets (Diet 2 and 3) were not significantly different from those on broken rice diet (Diet 1). Replacement of cassava for broken rice (Diet 2 and 3) have significantly ( $P<0.05$ ) increased feed intake but significantly ( $P<0.05$ ) impaired feed conversion ratio of the animal when compared to those on broken rice diet (Diet 1). Ducks on Diet 2 have significantly longer digestive tract than those on Diet 1. There were no significant different in chemical composition of meat of ducks fed the experimental diets.

Ducks fed Diet 2 had a significantly lower ( $P<0.01$ ) *E.coli* content in cecum than those on Diet 1 while ducks fed Diet 3 also had low *E.coli* content in cecum than those fed Diet 1 but the different was not statistically significant. There were no different in total bacterial count, Lactic acid bacteria count and Yeast count in ducks fed the experimental diets.

The panel testing of the experimental duck meat found that there were no statistical different in taste and meat quality of ducks fed the experimental diets.



Student's signature



Thesis Advisor's signature

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