

Nisarath Yaophakdee 2014: Effects of Two Different Feed Enzymes on Live Performances of Broilers Fed Diets Containing Palm Kernel Meal. Master of Science (Animal Nutrition and Feed Technology), Major Field: Animal Nutrition and Feed Technology, Department of Animal Science. Thesis Advisor: Assistant Professor Yuwares Ruangpanit, Ph.D. 73 pages.

The objective of this study was to determine Effects of Two Different Feed Enzymes on Live Performances of Broilers Fed Diets Containing Palm Kernel Meal (PKM). A total of 1,800 day-old Ross 308 broiler chicks were randomly divided into 6 dietary treatments with 6 replications per treatment. The experimental design was 2×3 Factorial in Completely randomized design with 2 levels of PKM (low and high) and 3 types of enzyme including, 1) no enzyme, 2) enzyme complex (amylase, protease, xylanase; XAP), and 3) enzyme mannanase (M). There was no significant interaction between the effect of PKM levels and enzyme supplementation on broiler performance. Birds fed high level of PKM in the diets tended to have higher feed intake ( $P=0.0918$ ) and significant lower body weight gain ( $P<0.01$ ), which led to a significant higher feed conversion ratio ( $P<0.01$ ). However, The supplementation of both XAP and M enzymes improved growth performance during starter period fed diets containing PKM. Feeding high PKM in broiler diet caused a significant lower in % breast and thigh. The supplementation of XAP enzyme help to improve % breast of broiler fed high PKM diet There was no significant interaction effect and main effect of PKM level and enzyme supplementation on *Clostridium perfringens* prevalence and gut morphology of broiler ( $P>0.05$ ).

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