THESIS TITLE : EFFECTS OF PHYTASE ENZYME SUPPLEMENTATION IN FEEDS ON PERFORMANCE AND BONE RETENTION PHOSPHORUS IN BROILERS AND MEAT DUCKS.

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ABSTRACT

The objective of experiment were studied the effects of tested series of microbial phytase doses (300, 600, 900 and 1200 FTU/Kg.diet) in two experiments. The ration in broilers was based on corn-soybean and fishmeal and in meat ducks was based on broken-rice soybean and fishmeal diet. The dose series were compared with two treatment : One treatment which met the P requirement by adding inorganic P to provide 0.45 %available (aP) in the diet for positive (PC). The second treatment contained 0.225 %aP for negative control (NC) which also used this basal diet for tested series of phytase doses in both two experiments. The results indicated in both two experiments that supplemental phytase improved body weight gain (BWG), feed:gain (F/G) bone composition of femur, tibia and tarsometartasus (length, width, bone weights and extracted fat bone weight). The performance (weight gain and F/G) composition and physical of bone were improved in a dosage-dependent manner. In Experiment 1, phytase supplementation of low-P (NC) diets restored BWG, F/G composition and physical, of bone and mortality to level that approached those of broilers fed adequate P control PC diet during 0-3, 0-6 and 3-6 week of age with the phytase dosages at the

level 900, 900 and 600 FTU/Kg.diet, respectively. Similar results were also obtained in Experiment 2 with meat ducks. Maximum BWG, F/G, composition and phytase of bone and mortality were obtained at the phytase dosage 1200 FTU/Kg.diet for all periods tested. It is generally conceded in Experiment 1 that older broiler utilized phytate phosphorus to a greater extent than young chicks. This result indicated that the phytase activity percent in gastrointestinal tract of the broilers were increased age.