

Ake-narin Rongram 2007: Replacement of Broken Rice by the Combination of Cassava Pulp and Brewery Activated Sludge in Growing and Finishing Pigs Diets. Master of Science (Agriculture), Major Field: Animal Science, Department of Animal Science. Thesis Advisor: Associate Professor Angkana Harnbunchong, M.S. 82 pages.

The purpose of this study was to determine the effect of replacement of broken rice by the combination of cassava pulp and brewery activated sludge in diets on performance and carcass quality of growing and finishing pigs. This study was divided into 2 experiments.

Experiment 1. The experiment was conducted to determine effect of cassava pulp combined brewery activated sludge (CCB) in diet on apparent digestibility of growing and finishing pigs. In growing pig, eight crossbred (Pietrain  $\times$  Large White  $\times$  Landrace) barrows and 25-30 kg weighting were used in completely randomized design with 2 treatment (Broken rice 97.20 % and CCB 97.20 %). The results showed that apparent digestibility of dry matter were 73.44 and 63.24 percentage, digestibility of crude fiber were 78.27 and 68.52 percent and digestibility of energy were 82.53 and 65.95 percent respectively ( $P < 0.05$ ). However, digestibility of crude protein and ether extract were not significantly different ( $P > 0.05$ ). In finishing pig, eight barrows averaged 60-65 kg of weight treatment and experiment method were the same as growing pigs. The results showed that apparent digestibility of crude fiber were 78.79 and 67.84 percent, digestibility of energy were 83.23 and 67.71 percent respectively ( $P < 0.05$ ). However digestibility of dry matter, crude protein and ether extract were not significant different ( $P > 0.05$ ).

Experiment 2. The experiment was conducted to determine effect of replacement of broken rice by CCB in the diet on performance and carcass quality of growing-finishing pigs. Forty-eight females crossbred (Pietrain  $\times$  Large White  $\times$  Landrace) averaged 44 kg weighting were randomly fed experimental diets in 4 dietary treatments, each consisting of 3 replications, with 4 treatments of replacement of broken rice by the combination of cassava pulp and brewery activated sludge levels (0, 50, 75 and 100 percent). The results showed that performance and carcass quality such as average daily gain, average daily feed intake, feed conversion ratio, percentage lean, backfat, loin deep, loin eye area and feed cost per gain in pigs were not significantly different ( $P > 0.05$ ). However, average daily gain were 0.939, 0.983, 0.885 and 0.913 kg, average daily feed intake were 2.20, 2.34, 2.09 and 2.16 kg and feed conversion ratio were 2.34, 2.38, 2.36 and 2.37 respectively.

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