Wisut Maitreejet 2010: Utilization of Total Mixed Ration Silage Containing Pineapple Peel as Fiber Source in Fattening Beef. Master of Science (Animal Nutrition and Feed Technology), Major Field: Animal Nutrition and Feed Technology, Department of Animal Science. Thesis Advisor: Assistant Professor Lerchat Boonek, Ph.D. 89 pages.

Two experiments were carried out to determine the effect of total mixed ration of pineapple peel silage on performance for fattening beef. The first trial was to evaluate quality of pineapple peel silage that allocated into 2 experimental Treatments: 1) pineapple peel silage 2) total mixed ration of pineapple peel silage (15 %protein) The results showed that DM, pH value, organic acids and water soluble carbohydrate level of pineapple peel silage differed significantly ($P<0.01$). Lactic acid compositions of pineapple peel were significant different with the highest value in treatment 1 (7.15%). Also ammonia - nitrogen level of all treatments differed significantly ($P<0.01$).

The second trial was aimed to compare the effect of pineapple peel silage as roughage sources in total mixed ration on rumen condition, plasma metabolites and performance of fatting Kumphaeng Saen beef cattle. Twelve experimental animals were randomly allocated to 3 experimental groups in a completely randomized design trial. The animals received total mixed ration (TMR): TMR1 (control), TMR 2 (15%protein total mixed ration of pineapple peel silage) and TMR3 (7 %protein pineapple peel silage plus concentrate supplement mixed befor feeding). The results showed that the rumen pH, Ruminal ammonia - nitrogen, Blood urea nitrogen (BUN) and Blood glucose (BG) concentration of all treatments were not significantly ($P>0.05$). Daily dry matter intake (DMI) of animals fed TMR1, TMR2 and TMR3 was significant different with the mean values of 9.77, 4.35 and 9.28 respectively ($P<0.05$). Consequently average daily gain (ADG) and Feed conversion ratio (FCR) of animals fed TMR2 was lowest when compare with other group (1.14, 0.13 and 1.40 kg./d. and 9.40, 27.41 and 13.34 respectively) ($P<0.05$). The profit of feeding of 3 experimental diets were 3.38, -6.43 and 4.21 % for TMR1, TMR3 and TMR2, respectively ($P<0.05$). These results indicated that high moisture 0f TMR2 resulted in low palatability and dry matter intake and performance of animals as compared to other groups.

_____ _____ ___ / ___ / ___

Student's signature Thesis Advisor's signature