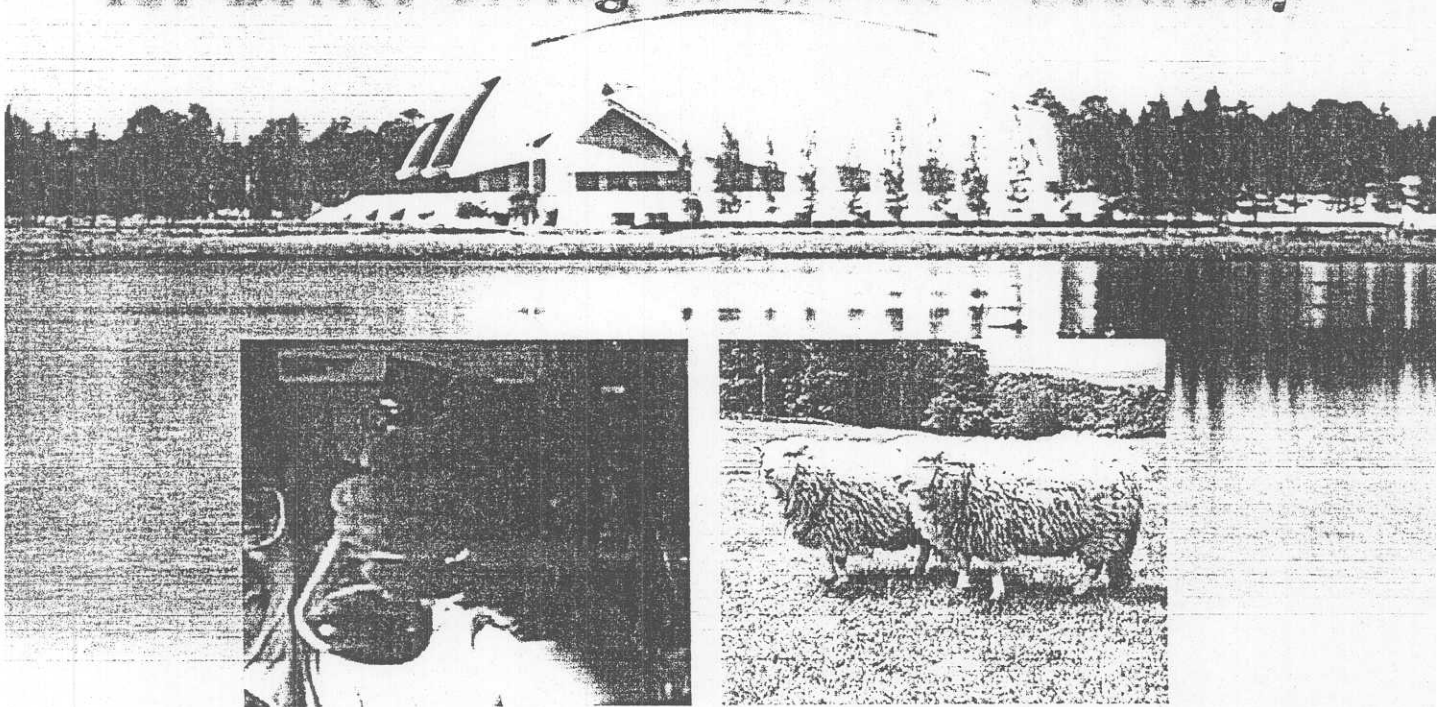


ABSTRACTS

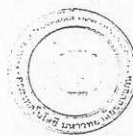
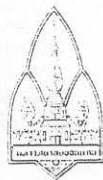
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Silage Production and Silage Lactobacillus Survival in the Digestive Tract of Dairy Cows

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Silage, an animal feed, is obtained from the fermentation of forage crops by bacteria. Lactobacilli play an important role in the production of silage as well as probiotics, a live microbial feed supplement. This study aims to produce silage and investigate the survival of silage lactobacilli in the digestive tract of dairy cows which will be useful for the selection of silage inoculant strain(s) to achieve the successful silage production in Thailand and the probiotic strain(s). Silage was prepared using forage sorghum both without and with the addition of *Lactobacillus plantarum* SUT-8 inoculant. The silage products had their average pH value of 4.28 and 4.32 respectively, and were very similar in appearance. Lactobacillus numbers of 1.12×10^7 and 5.40×10^8 CFU/g (wet weight) were detected in silages without and with inoculants. When feeding three groups of fistulated dairy cows with the silages for 13 days, lactobacillus numbers were found to be consistent in both rumen and feces of all cows. Average lactobacillus numbers of 1.50×10^2 , 9.63×10^5 , and 2.81×10^6 CFU/g were found in rumen; and $<30(10)$, 1.67×10^2 , and 1.53×10^2 CFU/g in feces of the control group, the groups fed with silages without and with inoculants respectively. Dominant isolates of *Lactobacillus plantarum*, *L. brevis*, *L. buchneri*, *L. casei*, and *L. fermentum* were detected in both silages and digestive tract samples from the cattle fed with silages. The silage inoculant strain was also found in all samples concerned with the strain. It reveals that these silage lactobacilli and the inoculant strain can survive in the digestive tract of dairy cows.