

Thirayut Phonglertrit 2009: Farmers' Adoption on the Application of Natural Rubber Mats in Dairy Farming. Master of Science (Agricultural Research and Development), Major Field: Agricultural Research and Development, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Supaporn Thaipakdee, Ph.D. 135 pages.

The objectives of this research were to study: 1) the farmers' socio-economic background, dairy farming, dairy farm background, and rubber mat knowledge, 2) the farmers' adoption and satisfaction on rubber mats, 3) the relationship between farmers' adoption and satisfaction on rubber mats, and 4) the problems and recommendations of natural rubber mats. The population consisted of 46 dairy farmers, 19 officials of Dairy Farming Promotion Organization of Thailand (D.P.O.) attending the training course on the application of the natural rubber mat of dairy farming, and 3 farmers using the natural rubber mats for dairy farming. Interview Schedules were used for data collection. Percentage, arithmetic mean and Pearson Product Moment Correlation Coefficient were utilized for data analysis.

The results revealed that 1) population were males with average age 41.88 years and finished compulsory school. The farmers owned their land and their housing not exceed 0.2 rai. The farmers worked in small dairy farms (1-20 dairy cows) with average income 643,889 bath per year. Most farmers did not have grass land. Their farming land was not exceed 0.2 rai. Dairy cows were raised on concrete free stall and soil surface in dairy housing. The labour average in dairy farms was 2.41 persons per farm. Most diseases found in dairy farm were mastitis, hock inflammation, leg lesion, laminitis and hoof lesion, respectively. The farmers had very good knowledge on mastitis diagnosis, treatment for the dairy infected by mastitis, and appropriate time to draw milk in dairy cow before parturition. However, the farmers did not knowledge of percentage of green forage fed for the dairy cow (calculating from body weights). Most farmers never heard of rubber mats. 2) Fifty-eight point seven percent of farmers were in the adoption stage and 55.38 percent were in high satisfaction level. 3) Adoption level had positive relation to the pattern of dairy housing and amount of family labour in dairy farms ( $p < .05$ ). Satisfaction level had positive relation to the farmers' land size ( $p < .01$ ), to the level of expedient to access knowledge on rubber mat ( $p < .05$ ) and to farmers' grass land. 4) The problems found were an expensive price of the natural rubber mats. Farmers rejected using the rubber mats because 86.7 percent of them were small farms. In addition, some farmers needed to obtain a loan from local dairy cooperatives; however, there was no coordinating from related sectors. Furthermore, the farmers needed inexpensive and more knowledge on rubber mats.

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Thesis Advisor's signature