Winutda Ketkaow 2010: An Expert System Program Diagnosing Basic Problems of Dairy Farms. Master of Science (Agricultural Information Technology), Major Field: Agricultural Information Technology, Interdisciplinary Graduate Program.
Thesis Advisor: Associate Professor Jeerachai Kanjanapruthipong, Ph.D. 84 pages.

To be an optional program helping diagnosing and solving basic problems for dairy farmers, the design of an expert system diagnosing basic problems of dairy farms program covered areas of production costs, efficiency of milk production and fertility, and mastitis. Knowledge acquisition and base, fact and rule created by this program was withdrew from Dairy Herd Management. The PHP language was used to connect the data base that designed in webpage style by HTML language. An access to this program online and answer the question step by step was tested and then the program would provide solutions of the problems. The program diagnosing production cost by using milking cow ratio which was below 84% and using replacement ratio which was above 50%. The program diagnosing efficiency of milk production by using average days in milk which were below 135 days and above 165 days. The program efficiency of fertility by using past year calving intervals which were above 390 days. In addition, the program diagnosing mastitis by using unsuitable milking hygiene. This program was evaluated for satisfaction by 30 users related to animal husbandry. The overall satisfaction after the use was high averaging 3.60 ± 0.64. Satisfaction surveys show that users are able to follow the program. The diagnosis and solution to problems are practicable.

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