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THAVORN THAIYANANT: THE ANALYSIS, DESIGN AND DEVELOPMENT OF INFORMATION SYSTEM; CASE STUDY AT ANIMAL PRODUCTION DIVISION, NATIONAL LABORATORY ANIMAL CENTRE, MAHIDOL UNIVERSITY. THESIS ADVISORS: PROFESSOR THEERAPORN RUBCUMINTARA, Ph.D., WISSUTA DITTHAKARNNON, M.Sc, KARNJANA KEANGKUM, M.Sc. 113 p. ISBN 974-663-146-2

This research has been developed with aims to conduct the production plan, to control the breeds and to efficiently produce laboratory animals focusing on both quality and quantity. The lab-animal subjects are the strain; the Wistar Rat, the Sprague Dawley Rat, and the ICR Mouse. The production of these is based on the outbred method. In the research, the data link among the Customer Service Division, the Animal Production Division, the Research & Development Division, and the hardware and software specifications for the NLAC-MU's information systems are presented.

This research was conducted based upon a feasibility study. Data were collected both from the primary and secondary sources for use in the system analysis and design. The researcher used Microsoft Visual Basic 5 in developing the program and Microsoft Access 97 in creating the database. The findings are that the Animal Production Division is able to conduct the production plan and control the production efficiently. The data link between the Customer Service Division and the Animal Production Division enables the Customer Service Division to check the quantity of the available rats in a particular period of time, and the rat orders can be made on the NLAC-MU's network system. In addition, data linked to the Research and Development Division is necessary since the rat records from the Animal Production Division can be automatically sent to the Research and Development Division for analyzing the quality and health of the rats. Also, the system assists executives in monitoring the Animal Production Division's operation.

The data link among the three divisions and the information system, the Animal Production Division suggest conducting a feasibility study on the use of this information technology in the production process of other kinds of laboratory animals.