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WARUNEE PIANLERTPOJ: DEVELOPING INFORMATION SYSTEM OF SEED AND SEEDLING MANAGEMENT FOR SOIL AND WATER CONSERVATION: A CASE STUDY OF LAND DEVELOPMENT DEPARTMENT. THESIS ADVISORS: BUNLUR EMARUCHI, Ph.D., THANAKORN UAN-ON, D.Engr., SUTTINANT NANTTACHIT, M.S., PIYADA CHITCHUMNONG, M.Sc. 197 p. ISBN 974-664-862-4

As the amount of seed and seedling and stock transaction increases, it becomes more and more difficult to remember or approximate stock balances. An information system is needed to supplement the human mind. This research is aimed at introducing an information system of seed and seedling management for soil and water conservation, a case study of Land Development Department, which could reduce access time, increase accuracy and consistency of data. The information system was designed and developed using data flow analysis, relational database (Sybase SQL anywhere 5.0 as DBMS) and Object-Oriented programming (Powersoft Powerbuilder Enterprise Version 6.0).

The information system consists of three major processes: 1) Data manipulation: Manipulate relative data; 2) Transaction processing: Support operation management, which are distribution, transfer, purchase, production and receiving; 3) Query and report: Process pre-defined outputs and preplanned printed reports. Since the information system works on client/server network, users are divided into 3 levels: database administrator, operator and general user. Moreover, the information system used in many places, may not support an online system. For this reason, the data will be sent and executed at database center by electronic mail or file transfer process.

The information system solves and improves the inefficiency of seed and seedling management. Furthermore, the information system can develop functions for supporting electronic signature, applied to Internet/Intranet or OLAP application. In addition, the information system can be linked to another relative systems for a complete seed and seedling management system, which can be applied to EIS.