Computer software for evaluation of farm animals – Swine Breeder

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Livestock industry plays a significant role in the Agricultural sector in Sri Lanka. A major constraint to the livestock production is lack of proper evaluation systems to ascertain the suitability of the breeding and management practices. This attributed to lack of proper record keeping system. The new information technology can be efficiently used to improve the farm evaluation systems provided suitable software for the local situation is developed.

This project was aimed at designing and construction of computer software package with the main objectives being the development of an information system to supply the management practices of swine and simulation of the breeding practices. The data were collected from Welisara and Horakele farms of the National Livestock Development Board (NLDB).

Data was analysed and a statistical model was developed in half sibs under R-squire = 87.4% accuracy. That model gives average body weight gain in F1 generation. Accuracy of the model can be increased using the pedigree details of the animal further. The software was developed with the use of Microsoft Access as a relational database, Structured Query Language Statements and the Visual Basic Programming Language.

The developed system contains emanation features such as menu bars, shortcut keys, tool bars and tool tips for data inserting, editing, finding and deleting. Preventing the data duplication, help function is also available. Furthermore the software provides multiple user interfaces. Several types of records such as animal welfare, feeding, matting, farrowing, litter, location changing and management practices can be handled by this software. Automatically find the scheduled task such as rooting practices, weight measuring, ear nothing, castration, tooth clipping and so on.

The present software can be used to identify the problem breeders from other healthy animals. The developed statistical model incorporated into this package helps the farmer to choose the elite Sow and given the pedigree information about the selected Sow/s. Pedigree of the simulated heard and animal location changing with the activity.

The developed system has been evaluated by using data received from NLDB for checking the validity and the accuracy of the statistical model. The package further can be developed as web base information system.

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