C-03 : DESIGNING FIELD EXPERIMENTS AND SURVEYS USING MICROCOMPUTER AND APPLICATION SOFTWARE

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The development and use of a system to design agricultural field experiments and surveys more accurately for research workers is described. This system is based on 13 types of common balanced designs and 3 popular survey methods used in agricultural research. The overall logical structure of the design system consists of 2 modules which design field experiments and surveys. The system methodology used by this design system places an emphasis on experimental designs and surveys used in sugarcane research. This package will help its user decide upon the most appropriate design(s) and survey method(s) to be used with the available resources. All steps involved in this process are controlled through a menu driven system which was implemented using the dBASE IV programming language and its associated DBMS. The compiled object code of the system can also be run under dBASE III or Clipper software. This application package is user friendly since its user does not need any Computing or Statistical expertise. Users who have an elementary knowledge of the basic concepts of field experimental designs, and their similarities and differences, will get further benefits from this package, namely they will be better able to exploit the system when it presents alternative ways of undertaking the task.