

B-14: Computerised methods to process data on sugarcane breeding programme

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The plant breeding programme of SRI was used to produce new sugarcane varieties. The SRI used 3 methods viz. plant breeding, hybridization and tissue culture techniques for this purpose. The main objective of the programme was to produce high yielding sugarcane varieties to be grown under both rainfed and irrigated conditions in different agro-ecological regions of Sri Lanka.

This programme consists of 12 sub-programmes viz. germplasm collections, fuzz importations, quarantine tests, arrowing block, crossing programme, testing stage 1 to 7. The processes involved in each sub-programme results in accumulation of a considerable amount of data. This data is processed in numerous ways to achieve comprehensive inferences.

SRI has developed a computer program, which includes 3 modules, to handle all the data involved in this breeding programme. This system includes a structured centralised database to store data collected, which is managed by a relational database management system which allows authorised users to view the data in the system, select required data and analyse them in meaningful ways, store data avoiding redundancy or violating database integrity rules and quickly access any portion of the logical data held in the system.