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Application of database technologies for monitoring the performance of nutrient uptake and irrigation levels in oil palm

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Oil palm requires adequate irrigation, as it is a fast growing crop with high productivity and biomass production. It is also a heavy feeder and demands a balanced and adequate supply of macro, secondary and micro - nutrients for its growth and yield. Fertilizer requirement under irrigated conditions is being studied under fertigation to standardize the fertilizer dosage and improve nutrient use efficiency. Also, the water requirement using the drip and micro irrigation methods is being studied to standardize the water-use efficiency. For these studies, the palm-wise data needs to be compiled and analysed to know the performance of the crop for various fertilizer and irrigation levels. Requirement analysis was done to identify the input output characteristics of the experiments. Database modules were designed and developed in MS Access using the Visual Basic for Applications to record the palm-wise data on different characters and to retrieve information in the form of various reports for the selected period of various duration like day, month and year. User friendly screens were designed for this purpose. The software enables to retrieve the data on treatment means for various parameters and export it to Excel format for further analysis using any statistical software. The software was tested for its function and is implemented.

Biography

K. L. Mary Rani has completed her Ph.D. in Computer Applications from Sri Padmavathi Mahila Viswa Vidyalayam and is presently working as Scientist at Directorate of Oil Palm Research, Andhra Pradesh.

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