A Decision Support System for Determinig the Effect of Seeding Rate on Crop Yield

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Abstract

The rapidly growing demand for the application of information technology have induced managers, farmers and policy makers to question the advantages and the performances of these systems.

In Sudan the information systems application started to grow in the last few years, specially systems designed to automate payroll, accounts payable, inventories control and other old ideas in the domain of international computer software application. However, agricultural and environmental information technology applications and decision support systems (DSS) are suffering from stagnancy. Moreover, it was found that the agricultural, environmental and resource management researchers suffer from the insufficiency of information technology applications and computer software support especially during the period of research preparation and results calculation. All the mentioned causes waste a lot of time and effort as after designing the experiment, collecting the raw data and during the stage of decision creation, the data manipulation is done manually. So the degree of accuracy, reliability and promptness achieved from these calculations, gives no satisfaction.

This study constructs a DSS to support agronomists, stands for their ideas and helps them in determining the better level of one parameter out of two parameters applied in the field. The objectives of this study are to: accurate and simplify the data entry; organise and simplify the process of data showing during entering and after entering; reproduce represent tables and calculate the vertical and horizental totals and means as desired for scientific papers; give consecutive steps and information that help computer-ignorant researchers to execute different stages in order to support them with their decision finding for the best seeding rate that is suitable at the specified circumstances of the field.

Keywords: agricultural information systems, split-plot design

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