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RESEARCH ARTICLE :

Computer aided modelling on farm mechanisation for rice cultivation in Chhattisgarh

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SUMMARY : Selection of proper size of farm power and machinery is the most important component of any farm enterprise. Among the various inputs to the crop production system, power and machinery jointly represent the largest single item of expenditure constituting about 60% of the total investment on a farm. A decision making program for tractor matching implements during cultivation of rice is framed. Most cost effective rice based cropping system was identified. The cost economics of different cultivation practices was worked out. Computer based least cost models are developed in C++ programming language for the selection of optimum size power and machinery system for paddy cropping system with the input like area under the crop, soil type, number of operations for each crop, crop rotation and time available for each operation etc. The model selected the optimum tractor size from amongst the available sizes and its matching implements keeping in view the capacity of machinery to complete the operation in scheduled time for the given farm. The model also computes the working hours for different field operations along with various cost components. Thus, the model predictions are good for paddy and can be used successfully for selection of optimal power and machinery.

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