BALANCED INCOMPLETE BLOCK DESIGN – A REVIEW AND ITS ANALYSIS IN COMPLETE DATA AND WITH ONE MISSING OBSERVATION

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Abstract: When the size of the experimental material is not sufficient to accommodate all the treatments, we require incomplete block designs to test various treatments under study in agricultural and biological sciences. The author of the present paper has discussed one of the incomplete block design, namely, Balanced Incomplete Block Design (BIBD). He has tried to present the review of the available literature on BIBD in brief, its analysis in case of complete data, and in case of one missing observation as well. The subject matter discussed here is not entirely new, but its presentation is new. However, the method for the analysis of BIBD in presence of one missing observation has been developed by him in 1992 in his unpublished Ph. D thesis. The Complex mathematical expressions are avoided in the present paper, and only simple expressions are provided to analyze the data. The methods are also supported by suitable examples. This will be of great help to the investigators engaged in agriculture and biological sciences.

Keywords: Adjusted treatment total, Adjusted treatment mean, Bias, Varietal trials

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