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**International Research Journal of Agricultural Economics and Statistics**

Volume 11 | Issue 1 | March, 2020 | 71-80 ■ ISSN-2229-7278



Research Paper

# Construction of pairwise balanced design using $3^n$ -factorial design

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***Paper History :***

**Received** : 29.01.2020;

**Revised** : 12.02.2020;

**Accepted** : 19.02.2020

**ABSTRACT :** A new procedure for construction of pair-wise variance and efficiency balanced design with equal replications and unequal block sizes is proposed using  $3^n$ -symmetrical factorial design with illustration. Further optimality of the constructed design has been checked and found it to be universally optimal.

**KEY WORDS :** Balanced incomplete block design, Pair-wise design, Variance balanced design, Efficiency balanced design, Universally optimal design,  $3^n$ -factorial design

**HOW TO CITE THIS PAPER :** Awad, Rashmi and Banerjee, Shakti (2020). Construction of pairwise balanced design using  $3^n$ -factorial design. *Internat. Res. J. Agric. Eco. & Stat.*, **11** (1) : 71-80, DOI : 10.15740/HAS/IRJAES/11.1/71-80. Copyright @2020:HindAgri-Horticultural Society.