Monograph on α-designs

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α-designs are resolvable incomplete block designs, introduced by Patterson and Williams (1976). Its parameters are $v = ks$, $b = r$, s, k, r and s. The dual of these designs are also α-designs. a-designs are useful as field experiment with large number of varieties. Most of the times, it may not be feasible to run the entire experiment in one season or location. In resolvable block designs locations or seasons are taken care of by replications and variation within a location or season is taken care of by blocking.

The monograph contains a-arrays for generating a-designs along with the layout plan of a-designs with $6 \le v \le 150$, $3 \le k \le 10$, $2 \le r \le 5$.

Comparisons of a-designs are made with corresponding square lattice designs, rectangular lattice designs, resolvable PBIB (2) designs given in Clatworthy (1973) and the α-designs obtainable from arrays given by Patterson *et al*. (1978) and from dualization of these basic arrays. Quite a good number of the designs perform better.

This is a well prepared and useful monograph for variety trials where the experiment is to be spread at different locations or seasons. I must congratulate the authors for the commendable work. I am tempted to anticipate a similar endeavour on factorial experiments.

However, I would like to mention that if and when a revision of the monograph is made, α-designs with (i) $k = 2$ (ii) $6 £ r £ 10$, and an example showing analysis of data obtained from an experiment conducted in a-designs may be considered for inclusion.

REFERENCES

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