

Crossover design for $v = 5, p = 5, n = 10$

Periods	Experimental Units									
	1	2	3	4	5	6	7	8	9	10
1	4	1	5	2	3	5	1	2	3	4
2	3	5	4	1	2	1	2	3	4	5
3	5	2	1	3	4	4	5	1	2	3
4	2	4	3	5	1	2	3	4	5	1
5	1	3	2	4	5	3	4	5	1	2

Catalogue of Designs

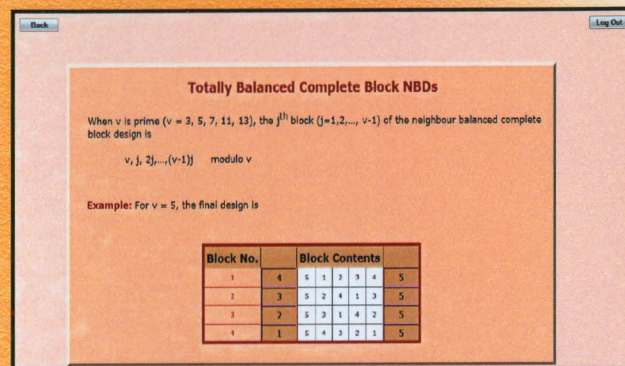
- ★ Online catalogue for $v \leq 20$ of NBDs and Crossover Designs is available.
- ★ Search facility of all designs and designs for some particular value of parameters is provided along with showing the layout of the design.

Key Features

- ★ Web based
- ★ User friendly
- ★ Menu driven
- ★ Compatible with MS-Excel

Online HTML Help

Software provides online HTML help on construction of NBDs and Crossover Designs



User Management

- ★ Separate User Account
- ★ New User Registration
- ★ Change Password
- ★ Retrieve Forgotten Password

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Web Generation of Experimental Designs Balanced for Indirect Effects of Treatments

ट्रीटमेंट्स के अप्रत्यक्ष प्रभावों के लिए सन्तुलित परीक्षात्मक अभिकल्पनाओं का वेब जेनेरेशन

(<http://iasri.res.in/webdbie>)



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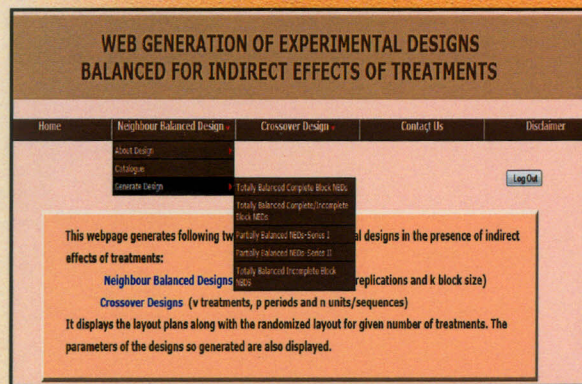
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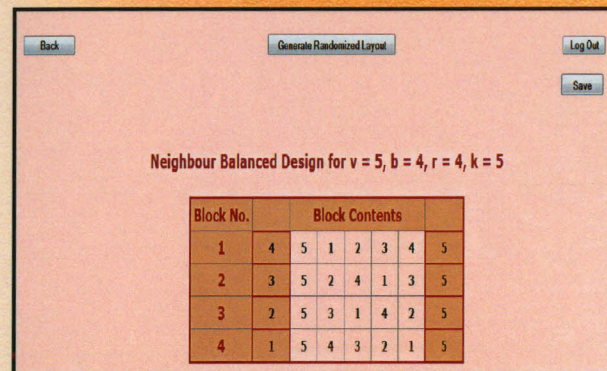
Indirect effects are effects which occur in an experiment due to the units which are adjacent (spatially or temporally) to the unit being observed. Spatial indirect effects arise due to the treatments applied to the adjacent neighbouring units/ plots and the designs incorporating these effects are called **Neighbour Balanced Designs (NBDs)** whereas temporal indirect effects occur because of the carryover or residual effects in the periods following the periods of their direct application and the designs considering temporal effects are called **Crossover Designs**. A large number of such designs have been developed in the literature. For ready referencing and potential use of these designs, an online software for generation of randomized layout of these designs is highly desirable. **WebDBIE** is a web based freely available software solution for generation of **NBDs** and **Crossover Designs** using client-server architecture along with an online catalogue of the designs within a permissible range. **WebDBIE** is accessible any time from arbitrary platforms through internet.

Generation of NBDs



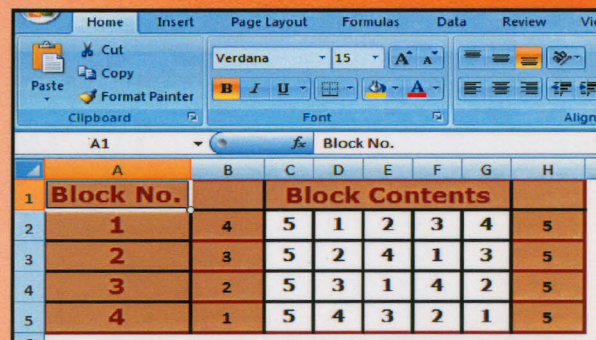
Various input forms have been designed and developed for the generation of the above listed designs.

- ★ The Module on **Neighbour Balanced Design** generates various classes of Complete/ Incomplete as well as Balanced/Partially Balanced Neighbour Balanced Block Designs (v treatments, b blocks, r replications and k block size) for a given number of treatments along with the parameters.
- ★ User can enter the number of treatments and then click on "Generate" to see the design



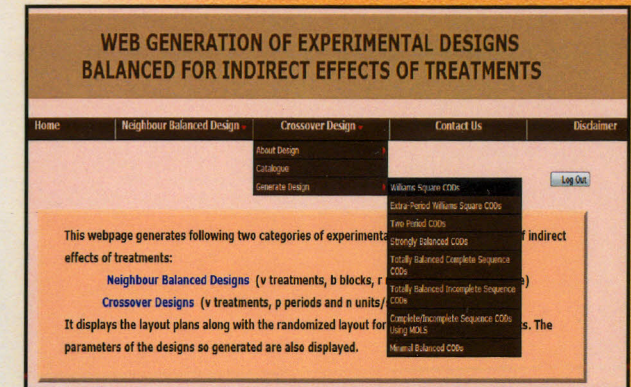
- ★ "Generate Randomized Layout" provides a randomized lay out of the generated design.
- ★ User can get the generated design in MS-Excel format by clicking on "Save" button.

Output in Excel



Generation of Crossover Designs

This Module on **Crossover Design** generates various classes of Complete/ Incomplete as well as Strongly/ Totally Balanced Crossover Designs (v treatments, p periods, and n units/ sequences) for a given number of treatments along with parameters.



- ★ Following is a Crossover (Williams Square) Design for v = 5:

Crossover design for v = 5, p = 5, n = 10

Periods	Experimental Units									
	1	2	3	4	5	6	7	8	9	10
1	4	1	5	2	3	5	1	2	3	4
2	3	5	4	1	2	1	2	3	4	5
3	5	2	1	3	4	4	5	1	2	3
4	2	4	3	5	1	2	3	4	5	1
5	1	3	2	4	5	3	4	5	1	2