

BeSTMod2_RCBDDesign.R

agmmortl

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```
#####  
## BeSTMod2_RCBDDesign.R  
## Author : Miranda Mortlock  
## For      BeST module 2  
## You need R and RStudio installed on your computer  
## Randomised complete block design  
## Code to assist randomising a RCBD  
## Customise for your experiment  
##  
## For a number of treatments (more than 2 treatments)  
## and randomised with blocking  
## This is a restriction in the design,  
## so each block has a full set of treatments  
## in experimental  
## units across the site  
## Randomising using R code  
##  
#####  
  
## Remember all lines with a hash (in green)  
## are comments to help you  
  
# Need this package  
library(agricolae)  
  
## Warning: package 'agricolae' was built under R version 3.2.1  
  
## This structure command gives the function:  
## str(design.rcbd)  
  
## I have copied it here for you to see,  
## and the hash has made it into a comment  
## function (trt, r, serie = 2, seed = 0, kinds = "Super-Duper",  
## first = TRUE, continue = FALSE)  
##  
#####  
### To change for your own design - CHANGE these two lines  
## trt is the names of your treatments  
## the replication is the number in each sample  
## it is spelled like this as it was built in spanish I think  
## In this example there are 4 reps  
  
## Here you set your treatments:
```

```

trt <- c("A", "B", "C", "D", "E")
repetition <- 4

## the following gives the design output

outd <- design.rcbd(trt,r=repetition, seed=-513, serie=2)

# RCBDbook <- outdesign$book

RCBDbook<- zigzag(outd) # zigzag numeration
## these lines print the randomisation and then the plot numbers

print(t(matrix(RCBDbook[,3],c(5,4))))

```

```

##      [,1] [,2] [,3] [,4] [,5]
## [1,] "D"  "B"  "C"  "E"  "A"
## [2,] "E"  "A"  "D"  "B"  "C"
## [3,] "E"  "D"  "B"  "A"  "C"
## [4,] "A"  "E"  "C"  "B"  "D"

```

```
print(t(matrix(RCBDbook[,1],c(5,4))),digits=0)
```

```

##      [,1] [,2] [,3] [,4] [,5]
## [1,] 101 102 103 104 105
## [2,] 205 204 203 202 201
## [3,] 301 302 303 304 305
## [4,] 405 404 403 402 401

```

```
write.csv(RCBDbook, "RCBDbook.csv", row.names=FALSE)
```

```
## you now have the randomisation as a *.csv file
```

```
##### Saved as a csv file
```

```
## Next steps, make an Excel file with Worksheets for
```

```
##
```

```
## 1 the randomisation (eg from this output)
```

```
## 2 the plot layout as in the glass house or field
```

```
## 3 your data sheet in a separate worksheet
```

```
## 4 metadata -the description of your variables and treatments
```

```
## 5 save this file and back it up too
```