Package ‘agricolaeplotr’

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Type Package

Title Visualization of Design of Experiments from the 'agricolae' Package

Version 0.2.2

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Description Visualization of Design of Experiments from the 'agricolae' package with 'ggplot2' framework. The user provides an experiment design from the 'agricolae' package, calls the corresponding function and will receive a visualization with 'ggplot2' based functions that are specific for each design. As there are many different designs, each design is tested on its type. The output can be modified with standard 'ggplot2' commands or with other packages with 'ggplot2' function extensions.

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Encoding UTF-8

Imports ggplot2, agricolae, rmarkdown

RoxygenNote 7.1.1

Language en-US

Suggests testthat (>= 3.0.0), knitr

Config/testthat/edition 3

BugReports https://github.com/jensharbers/agricolaeplotr/issues

URL https://github.com/jensharbers/agricolaeplotr

Depends R (>= 3.6)

VignetteBuilder knitr

Note ‘agricolae’ is a package name ‘ggplot2’ is a package name

NeedsCompilation no

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Repository CRAN

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plot_alpha

Plot Alpha design Experiments

Description

Plot a design of an experiment with an alpha design from agricolae design.alpha

Usage

plot_alpha(
  design,
  x = "cols",
  y = "block",
  factor_name = "trt",
)
plot_alpha

    labels = "plots",
    width = 1,
    height = 1,
    space_width = 0.95,
    space_height = 0.85,
    reverse_y = FALSE,
    reverse_x = FALSE
    )

Arguments

design          outdesign from agricolae package
x                Describes the x coordinates of a experiment design
y                Describes the y coordinates of a experiment design
factor_name     Which factor should be used for plotting, needs to be a column in outdesign$book
labels          Describes the column from that the plots are taken to display them
width            numeric value, describes the width of a plot in an experiment
height           numeric value, describes the height of a plot in an experiment
space_width      numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width
space_height     numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height
reverse_y        boolean, should the plots of the experiment be changed in reverse order in Row direction? use reverse_y=TRUE to have same sketch as in agricolae. default:reverse_y=FALSE
reverse_x        boolean, should the plots of the experiment be changed in reverse order in column direction? default:reverse_x=FALSE

Value

ggplot graphic that can be modified, if wished

Examples

library(agricolaeplotr)
library(agricolae)
trt<-1:30
t <- length(trt)
# size block k
k<-3
# Blocks s
s<-t/k
# replications r
r <- 2
outdesign<- design.alpha(trt,k,r,serie=2)
plot_alpha(outdesign)
plot_bib  

Plot Randomized Balanced Incomplete Block Designs

Description

Plot a design of an experiment with an Randomized Balanced Incomplete Block Designs (BIB) from design.bib

Usage

plot_bib(
  design,
  y = "block",
  factor_name = "trt",
  labels = "plots",
  width = 1,
  height = 1,
  space_width = 0.95,
  space_height = 0.85,
  reverse_y = FALSE,
  reverse_x = FALSE
)

Arguments

design  outdesign from agricolae package

y  Describes the y coordinates of a experiment design

factor_name  Which factor should be used for plotting, needs to be a column in outdesign$book

labels  Describes the column from that the plots are taken to display them

width  numeric value, describes the width of a plot in an experiment

height  numeric value, describes the height of a plot in an experiment

space_width  numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width

space_height  numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height

reverse_y  boolean, should the plots of the experiment be changed in reverse order in Row direction? use reverse_y=TRUE to have same sketch as in agricolae. default:reverse_y=FALSE

reverse_x  boolean, should the plots of the experiment be changed in reverse order in column direction? default:reverse_x=FALSE

Value

ggplot graphic that can be modified, if wished
Examples

```r
library(agricolaeplotr)
library(agricolae)
trt<-c('A','B','C','D')
k<-3
outdesign<-design.bib(trt,k,serie=2,seed =41,kinds = 'Super-Duper') # seed = 41
plot_bib(outdesign)
#now let us change position of the columns
plot_bib(outdesign,reverse_x = TRUE)
```

---

plot_cyclic  

Plot Cyclic Design

Description

Plot a design of an experiment with a cyclic design from agricolae design.cyclic

Usage

```r
plot_cyclic(
  design,
  y = "block",
  factor_name = "trt",
  labels = "plots",
  width = 1,
  height = 1,
  space_width = 0.95,
  space_height = 0.85,
  reverse_y = FALSE,
  reverse_x = FALSE
)
```

Arguments

design  outdesign from agricolae package
y  Describes the y coordinates of a experiment design
factor_name  Which factor should be used for plotting, needs to be a column in outdesign$book
labels  Describes the column from that the plots are taken to display them
width  numeric value, describes the width of a plot in an experiment
height  numeric value, describes the height of a plot in an experiment
space_width  numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width
space_height  numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height
---

**reverse_y**
Boolean, should the plots of the experiment be changed in reverse order in Row direction? Use reverse_y=TRUE to have same sketch as in agricolae. Default: reverse_y=FALSE

**reverse_x**
Boolean, should the plots of the experiment be changed in reverse order in column direction? Default: reverse_x=FALSE

---

**Value**

GGplot graphic that can be modified, if wished

---

**Examples**

```r
library(agricolaeplotr)
library(agricolae)
k <- 2
r <- 6
trt <- c('CIP-101', 'CIP-201', 'CIP-301', 'CIP-401', 'CIP-501', LETTERS[1:2])
outdesign <- design.cyclic(trt, k = k, r = r, serie = 3, rowcol = TRUE)
plot_cyclic(outdesign, factor_name = 'trt')
```

---

**Description**

Plot a design of an experiment with an augmented block design from agricolae design.dau

**Usage**

```r
plot_dau(
  design, 
  y = "block", 
  factor_name = "trt", 
  labels = "plots", 
  width = 1, 
  height = 1, 
  space_width = 0.95, 
  space_height = 0.85, 
  reverse_y = FALSE, 
  reverse_x = FALSE 
)
```

**Arguments**

- **design**
  Outdesign from agricolae package
- **y**
  Describes the y coordinates of a experiment design
- **factor_name**
  Which factor should be used for plotting, needs to be a column in outdesign$book
plot_design.factorial_crd

labels
width
height
space_width
space_height
reverse_y
reverse_x

Value

ggplot graphic that can be modified, if wished

Examples

library(agricolaeplotr)
library(agricolae)
T1<-c('A','B','C','D','E','F')
T2<-letters[19:26]
outdesign <-design.dau(T1,T2, r=5,serie=2)
plot_dau(outdesign)
plot_dau(outdesign,reverse_y = TRUE)

plot_design.factorial_crd

Plot Factorial Complete Randomized Designs (crd)

Description

Plot a design of a factorial experiment with completely randomized design (crd) from design.ab

Usage

plot_design.factorial_crd(
  design,
  ncols,
  nrows,
  y = "row",
  factor_name = "A",
  labels = "plots",
  width = 1,
  height = 1,
)
```r
space_width = 0.95,
space_height = 0.85,
reverse_y = FALSE,
reverse_x = FALSE
)

Arguments

design outdesign from agricolae package
ncols integer value, choose the number of columns to which the experiment should be plotted
nrows integer value, choose the number of rows to which the experiment should be plotted
y Describes the y coordinates of a experiment design, default is row
factor_name Which factor should be used for plotting, needs to be a column in outdesign$book
labels string indicates the column of which the labels should be displayed
width numeric value, describes the width of a plot in an experiment
height numeric value, describes the height of a plot in an experiment
space_width numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width
space_height numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height
reverse_y boolean, should the plots of the experiment be changed in reverse order in Row direction? use reverse_y=TRUE to have same sketch as in agricolae. default:reverse_y=FALSE
reverse_x boolean, should the plots of the experiment be changed in reverse order in column direction? default:reverse_x=FALSE

Value

ggplot graphic that can be modified, if wished

Examples

library(agricolaeplotr)
library(agricolae)
trt<-c(3,2) # factorial 3x2
outdesign <- design.ab(trt, r=3, serie=2, design = 'crd')
plot_design.factorial_crd(outdesign,ncols = 8,nrows = 6)
plot_design.factorial_crd(outdesign,reverse_y = TRUE,ncols = 8,nrows = 6)
plot_design.factorial_crd(outdesign,reverse_y = TRUE,reverse_x = TRUE,ncols = 8,nrows = 6)
```
plot_design.factorial_lsd

Plot Factorial Latin Square Designs (lsd)

Description

Plot a design of a factorial experiment with latin square design (lsd) design from agricolae design.ab

Usage

plot_design.factorial_lsd(
  design,
  x = "col",
  y = "row",
  factor_name = "A",
  labels = "plots",
  width = 1,
  height = 1,
  space_width = 0.95,
  space_height = 0.85,
  reverse_y = FALSE,
  reverse_x = FALSE
)

Arguments

design        outdesign from agricolae package
x             Describes the x coordinates of a experiment design
y             Describes the y coordinates of a experiment design
factor_name   Which factor should be used for plotting, needs to be a column in outdesign$book
labels        Describes the column from that the plots are taken to display them
width          numeric value, describes the width of a plot in an experiment
height         numeric value, describes the height of a plot in an experiment
space_width    numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width
space_height   numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height
reverse_y      boolean, should the plots of the experiment be changed in reverse order in Row direction? use reverse_y=TRUE to have same sketch as in agricolae. default:reverse_y=FALSE
reverse_x      boolean, should the plots of the experiment be changed in reverse order in column direction? default:reverse_x=FALSE
plot_design.factorial_rcbd

Plot Factorial Designs with rcbd Design

Description

Plot a design of a factorial experiment with randomized complete block design (rcbd) from design.ab

Usage

plot_design.factorial_rcbd(
  design,  
  y = "row",  
  factor_name = "A",  
  width = 1,  
  height = 1,  
  space_width = 0.95,  
  space_height = 0.85,  
  reverse_x = FALSE,  
  reverse_y = FALSE
)

Arguments

design outdesign from agricolae package

y Describes the y coordinates of a experiment design

factor_name Which factor should be used for plotting, needs to be a column in outdesign$book

width numeric value, describes the width of a plot in an experiment

height numeric value, describes the height of a plot in an experiment

space_width numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width

space_height numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height

Value

ggplot graphic that can be modified, if wished

Examples

library(agricolaeplotr)
library(agricolae)
trt<-c(3,2) # factorial 3x2
outdesign <-design.ab(trt, r=3, serie=2, design = 'lsd')
plot_design.factorial_lsd(outdesign,factor_name = 'B',reverse_x = TRUE)
plot_design_crd

reverse_x boolean, should the plots of the experiment be changed in reverse order in column direction? default: reverse_x = FALSE

reverse_y boolean, should the plots of the experiment be changed in reverse order in Row direction? use reverse_y = TRUE to have same sketch as in agricolae. default: reverse_y = FALSE

Value

ggplot graphic that can be modified, if wished

Examples

library(agricolaeplotr)
library(agricolae)
trt <- c(2, 4)
k = 6
outdesign <- design.ab(trt, r = k, serie = 3, design = 'rcbd')
plot_design.factorial_rcbd(design = outdesign, factor_name = 'B')
plot_design.factorial_rcbd(outdesign, reverse_y = TRUE, reverse_x = TRUE)

**Arguments**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>design</td>
<td>outdesign from agricolae package</td>
</tr>
<tr>
<td>ncols</td>
<td>integer value, choose the number of columns to which the experiment should be plotted</td>
</tr>
<tr>
<td>nrows</td>
<td>integer value, choose the number of rows to which the experiment should be plotted</td>
</tr>
<tr>
<td>y</td>
<td>Describes the y coordinates of an experiment design, default is row</td>
</tr>
<tr>
<td>factor_name</td>
<td>Which factor should be used for plotting, needs to be a column in outdesign$book</td>
</tr>
<tr>
<td>labels</td>
<td>Describes the column from which the plots are taken to display them</td>
</tr>
<tr>
<td>width</td>
<td>numeric value, describes the width of a plot in an experiment</td>
</tr>
<tr>
<td>height</td>
<td>numeric value, describes the height of a plot in an experiment</td>
</tr>
<tr>
<td>space_width</td>
<td>numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width</td>
</tr>
<tr>
<td>space_height</td>
<td>numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height</td>
</tr>
<tr>
<td>reverse_y</td>
<td>boolean, should the plots of the experiment be changed in reverse order in Row direction? use reverse_y=TRUE to have same sketch as in agricolae. default:reverse_y=FALSE</td>
</tr>
<tr>
<td>reverse_x</td>
<td>boolean, should the plots of the experiment be changed in reverse order in column direction? default:reverse_x=FALSE</td>
</tr>
</tbody>
</table>

**Value**

`ggplot` graphic that can be modified, if wished

**Examples**

```r
library(agricolaeplotr)
library(agricolae)
trt = c(2,3,4,5,6)
outdesign1 <- design.crd(trt,r=5,serie=2,2543,'Mersenne-Twister')
plot_design_crd(outdesign1,ncols = 13,nrows = 3)
```

---

**plot_graeco**

*Plot Graeco Latin Square Design*

**Description**

Plot a design of an experiment with a Graeco-latin square design from agricolae design.graeco
plot_graeco

Usage

plot_graeco(
  design,
  x = "col",
  y = "row",
  factor_name = "T1",
  labels = "plots",
  width = 1,
  height = 1,
  space_width = 0.95,
  space_height = 0.85,
  reverse_y = FALSE,
  reverse_x = FALSE
)

Arguments

design outdesign from agricolae package
x Describes the x coordinates of an experiment design
y Describes the y coordinates of an experiment design
factor_name Which factor should be used for plotting, needs to be a column in outdesign$book
labels Describes the column from that the plots are taken to display them
width numeric value, describes the width of a plot in an experiment
height numeric value, describes the height of a plot in an experiment
space_width numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width
space_height numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height
reverse_y boolean, should the plots of the experiment be changed in reverse order in Row direction? use reverse_y=TRUE to have same sketch as in agricolae. default:reverse_y=FALSE
reverse_x boolean, should the plots of the experiment be changed in reverse order in column direction? default:reverse_x=FALSE

Value
ggplot graphic that can be modified, if wished

Examples

library(agricolaeplotr)
library(agricolae)
T1 <- c("a", "b", "c", "d")
T2 <- c("v", "w", "x", "y", "z", "zz")
outdesign <- design.graeco(trt1=T1, trt2=T2, serie = 2,
  seed = 0, kinds = 'Super-Duper',randomization=TRUE)
plot_latin_square

plot_latin_square(outdesign, factor_name = 'T2', reverse_y = TRUE)
plot_latin_square(outdesign, factor_name = 'T2', reverse_x = TRUE)

---

**plot_latin_square**  
*Plot Latin Square Design*

**Description**
Plot a design of a factorial experiment with a Latin square design from *agricolae* design.lsd

**Usage**

```r
plot_latin_square(
  design,
  x = "col",
  y = "row",
  factor_name = "trt",
  labels = "plots",
  width = 1,
  height = 1,
  space_width = 0.95,
  space_height = 0.85,
  reverse_y = FALSE,
  reverse_x = FALSE
)
```

**Arguments**
- `design` outdesign from *agricolae* package
- `x` Describes the x coordinates of a experiment design
- `y` Describes the y coordinates of a experiment design
- `factor_name` Which factor should be used for plotting, needs to be a column in outdesign$book
- `labels` Describes the column from that the plots are taken to display them
- `width` numeric value, describes the width of a plot in an experiment
- `height` numeric value, describes the height of a plot in an experiment
- `space_width` numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width
- `space_height` numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height
- `reverse_y` boolean, should the plots of the experiment be changed in reverse order in Row direction? use reverse_y=TRUE to have same sketch as in agricolae. default: reverse_y=FALSE
- `reverse_x` boolean, should the plots of the experiment be changed in reverse order in column direction? default: reverse_x=FALSE
plot_lattice_simple

Value

ggplot graphic that can be modified, if wished

Examples

```r
library(agricolaeplotr)
library(agricolae)
trt<-LETTERS[1:9]
outdesign<- design.lsd(trt, serie=2)
plot_latin_square(outdesign, reverse_y = TRUE)
```

plot_lattice_simple  Plot Simple Lattice Design

Description

Plot a design of a factorial experiment with a lattice design from agricolae design.lattice with r=2

Usage

```r
plot_lattice_simple(
  design, 
  y = "block", 
  factor_name = "trt", 
  labels = "plots", 
  width = 1, 
  height = 1, 
  space_width = 0.95, 
  space_height = 0.85, 
  reverse_y = FALSE, 
  reverse_x = FALSE 
)
```

Arguments

design  outdesign from agricolae package

y  Describes the y coordinates of a experiment design

factor_name  Which factor should be used for plotting, needs to be a column in outdesign$book

labels  Describes the column from that the plots are taken to display them

width  numeric value, describes the width of a plot in an experiment

height  numeric value, describes the height of a plot in an experiment

space_width  numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width

space_height  numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height
reverse_y  boolean, should the plots of the experiment be changed in reverse order in Row direction? use reverse_y=TRUE to have same sketch as in agricolae. default:reverse_y=FALSE

reverse_x  boolean, should the plots of the experiment be changed in reverse order in column direction? default:reverse_x=FALSE

Value

ggplot graphic that can be modified, if wished

Examples

library(agricolaeplotr)
library(agricolae)
trt<-1:100
outdesign<-design.lattice(trt,r=2,serie=3) # simple lattice design, 10x10
plot_lattice_simple(outdesign,width = 2, height = 1)

plot_lattice_triple  Plot Triple Lattice Design

Description

Plot a design of a factorial experiment with a latin square design from agricolae design.lattice with r=3

Usage

plot_lattice_triple(
  design,
  y = "block",
  factor_name = "trt",
  labels = "plots",
  width = 1,
  height = 1,
  space_width = 0.95,
  space_height = 0.85,
  reverse_y = FALSE,
  reverse_x = FALSE
)

Arguments

design  outdesign from agricolae package

y  Describes the y coordinates of a experiment design

factor_name  Which factor should be used for plotting, needs to be a column in outdesign$book

labels  Describes the column from that the plots are taken to display them
width  numeric value, describes the width of a plot in an experiment
height numeric value, describes the height of a plot in an experiment
space_width numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width
space_height numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height
reverse_y boolean, should the plots of the experiment be changed in reverse order in Row direction? use reverse_y=TRUE to have same sketch as in agricolae. default: reverse_y=FALSE
reverse_x boolean, should the plots of the experiment be changed in reverse order in column direction? default: reverse_x=FALSE

Value

ggplot graphic that can be modified, if wished

Examples

library(agricolaeplotr)
library(agricolae)
trt<-LETTERS[1:9]
outdesign<-design.lattice(trt,r=3,serie=2)
plot_lattice_triple(design=outdesign,reverse_x=TRUE)

plot_rcdb

Plot randomized complete block designs

Description

Plot a design of an experiment with randomized complete block design (rcbd) design from agricolae design.rcbd

Usage

plot_rcdb(
  design,
  y = "block",
  factor_name = "trt",
  labels = "plots",
  width = 1,
  height = 1,
  space_width = 0.95,
  space_height = 0.85,
  reverse_y = FALSE,
  reverse_x = FALSE
)
Arguments

- **design**: output design from agricolae package
  - Describes the y coordinates of an experiment design
- **y**: Factor name
  - Which factor should be used for plotting, needs to be a column in outdesign$book
- **labels**: Factor name
  - Describes the column from that the plots are taken to display them
- **width**: numeric value
  - Describes the width of a plot in an experiment
- **height**: numeric value
  - Describes the height of a plot in an experiment
- **space_width**: numeric value
  - Describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width
- **space_height**: numeric value
  - Describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height
- **reverse_y**: boolean
  - Should the plots of the experiment be changed in reverse order in Row direction? use reverse_y=TRUE to have same sketch as in agricolae. default: reverse_y=FALSE
- **reverse_x**: boolean
  - Should the plots of the experiment be changed in reverse order in column direction? default: reverse_x=FALSE

Value

ggplot graphic that can be modified, if wished

Examples

```r
library(agricolaeplotr)
library(agricolae)
# 5 treatments and 6 blocks
trt<-c('A','B','C','D','E')
outdesign <- design.rcbd(trt,6,serie=2,986,'Wichmann-Hill') # seed = 986
plot_rcdb(outdesign)
plot_rcdb(outdesign,reverse_y = TRUE,reverse_x = TRUE)
```

---

**plot_split_crd**

Plot Split Plot Designs (crd)

Description

Plot a design of a split plot experiment with a complete randomized design (crd) from design.split
Usage

```r
plot_split_crd(
  design,
  nrows,
  ncols,
  factor_name_1 = "T1",
  factor_name_2 = "T2",
  labels = "plots",
  subplots = TRUE,
  width = 1,
  height = 1,
  space_width = 0.95,
  space_height = 0.85,
  reverse_y = FALSE,
  reverse_x = FALSE
)
```

Arguments

- `design`: outdesign from agricolae package
- `nrows`: Number of rows for the design
- `ncols`: Number of columns for the design
- `factor_name_1`: string Which factor should be used for plotting, needs to be a column in outdesign$book
- `factor_name_2`: string Which factor should be used for plotting, needs to be a column in outdesign$book
- `labels`: string Describes the column from that the plots are taken to display them
- `subplots`: should the plot function return the subplots (default) or main plots?
- `width`: numeric value, describes the width of a plot in an experiment
- `height`: numeric value, describes the height of a plot in an experiment
- `space_width`: numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width
- `space_height`: numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height
- `reverse_y`: boolean, should the plots of the experiment be changed in reverse order in Row direction? use reverse_y=TRUE to have same sketch as in agricolae. default:reverse_y=FALSE
- `reverse_x`: boolean, should the plots of the experiment be changed in reverse order in column direction? default:reverse_x=FALSE

Value

`ggplot` graphic that can be modified, if wished
Examples

library(agricolaeplotr)
library(agricolae)
T1<-c('a','b','c','d','e','f','g')
T2<-c('v','w','x','y','zzz')
r <- 4
outdesign2 <- design.split(trt1=T1, trt2=T2, r=r,
serie = 2, seed = 0, kinds = 'Super-Duper',
randomization=TRUE,first=TRUE,design = 'crd')
plot_split_crd(outdesign2,ncols = 6,nrows=5)

outdesign2 <- design.split(trt1=T1, trt2=T2, r=r,
serie = 2, seed = 0, kinds = 'Super-Duper',
randomization=FALSE,first=TRUE,design = 'crd')
plot_split_crd(outdesign2,ncols = 6,nrows=5)

plot_split_lsd

Plot Split Plot Design lsd

Description

Plot a design of a split plot experiment with latin squared design (lsd) from design.split

Usage

plot_split_lsd(
  design,
  factor_name_1 = "T1",
  factor_name_2 = "T2",
  labels = "plots",
  subplots = TRUE,
  width = 1,
  height = 1,
  space_width = 0.95,
  space_height = 0.85,
  reverse_y = FALSE,
  reverse_x = FALSE
)

Arguments

design        outdesign from agricolae package
factor_name_1 string Which factor should be used for plotting, needs to be a column in outdesign$book
factor_name_2 string Which factor should be used for plotting, needs to be a column in outdesign$book
labels        string Describes the column from that the plots are taken to display them
subplots should the plot function return the subplots (default) or main plots?
width numeric value, describes the width of a plot in an experiment
height numeric value, describes the height of a plot in an experiment
space_width numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width
space_height numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height
reverse_y boolean, should the plots of the experiment be changed in reverse order in Row direction? use reverse_y=TRUE to have same sketch as in agricolae. default:reverse_y=FALSE
reverse_x boolean, should the plots of the experiment be changed in reverse order in column direction? default:reverse_x=FALSE

Value

ggplot graphic that can be modified, if wished

Examples

library(agricolaeplotr)
library(agricolae)
T1<-c('a','b','c','d','e')
T2<-c('v','w','x','y')
outdesign2 <- design.split(trt1=T1, trt2=T2, r=r, serie = 2, seed = 0, kinds = 'Super-Duper', randomization=TRUE,first=TRUE,design = 'lsd')
plot_split_lsd(outdesign2,width = 4,height = 4)
Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>design</td>
<td>outdesign from agricolae package</td>
</tr>
<tr>
<td>y</td>
<td>string defines the block</td>
</tr>
<tr>
<td>factor_name_1</td>
<td>string Which factor should be used for plotting, needs to be a column in outdesign$book</td>
</tr>
<tr>
<td>factor_name_2</td>
<td>string Which factor should be used for plotting, needs to be a column in outdesign$book</td>
</tr>
<tr>
<td>subplots</td>
<td>should the plot function return the subplots (default) or main plots?</td>
</tr>
<tr>
<td>labels</td>
<td>string Describes the column from that the plots are taken to display them</td>
</tr>
<tr>
<td>width</td>
<td>numeric value, describes the width of a plot in an experiment</td>
</tr>
<tr>
<td>height</td>
<td>numeric value, describes the height of a plot in an experiment</td>
</tr>
<tr>
<td>space_width</td>
<td>numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width</td>
</tr>
<tr>
<td>space_height</td>
<td>numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height</td>
</tr>
<tr>
<td>reverse_y</td>
<td>boolean, should the plots of the experiment be changed in reverse order in Row direction?</td>
</tr>
<tr>
<td>reverse_x</td>
<td>boolean, should the plots of the experiment be changed in reverse order in column direction? default:reverse_x=FALSE</td>
</tr>
</tbody>
</table>

Value

ggplot graphic that can be modified, if wished

Examples

```r
library(agricolaeplotr)
library(agricolae)
T1<-c('a','b','c','d','e')
T2<-c('v','w','x','y','z','zz')
r = 3
outdesign2 <- design.split(trt1=T1, trt2=T2, r=r, serie = 2,
                          seed = 0, kinds = 'Super-Duper',randomization=TRUE,
                          first=TRUE,design = 'rcbd')
plot_split_rcbd(outdesign2,width = 1,height = 1)
plot_split_rcbd(outdesign2,width = 1,height = 1,reverse_y = TRUE)
plot_split_rcbd(outdesign2,width = 1,height = 1,reverse_x = TRUE,reverse_y = TRUE)
```
Description

Plot a design of an experiment with a Strip Plot design from agricolae design.strip

Usage

```r
plot_strip(
  design,
  x = "col",
  y = "row",
  factor_name_1 = "T1",
  factor_name_2 = "T2",
  labels = "plots",
  width = 1,
  height = 1,
  space_width = 0.95,
  space_height = 0.85,
  reverse_y = FALSE,
  reverse_x = FALSE
)
```

Arguments

definition of the package

\begin{itemize}
  \item \texttt{design} outdesign from agricolae package
  \item \texttt{x} Describes the x coordinates of a experiment design
  \item \texttt{y} Describes the y coordinates of a experiment design
  \item \texttt{factor\_name\_1} Which factor should be used for plotting, needs to be a column in outdesign$book
  \item \texttt{factor\_name\_2} Which factor should be used for plotting, needs to be a column in outdesign$book
  \item \texttt{labels} Describes the column from that the plots are taken to display them
  \item \texttt{width} numeric value, describes the width of a plot in an experiment
  \item \texttt{height} numeric value, describes the height of a plot in an experiment
  \item \texttt{space\_width} numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of width
  \item \texttt{space\_height} numeric value, describes the share of the space of the plots. 0=only space, 1=no space between plots in term of height
  \item \texttt{reverse\_y} boolean, should the plots of the experiment be changed in reverse order in Row direction? use reverse\_y=TRUE to have same sketch as in agricolae. default:reverse\_y=FALSE
  \item \texttt{reverse\_x} boolean, should the plots of the experiment be changed in reverse order in column direction? default:reverse\_x=FALSE
\end{itemize}
Value

ggplot graphic that can be modified, if wished

Examples

```r
library(agricolaeplotr)
library(agricolae)
T1<-c('a','b','c','d')
T2<-c('v','w','x','y','z')
r = 3
outdesign <- design.strip(trt1=T1, trt2=T2, r=r, serie = 2,
seed = 0, kinds = 'Super-Duper',randomization=TRUE)
plot_strip(outdesign,factor_name_1 = "T1" ,factor_name_2="T2")
plot_strip(outdesign,factor_name_1 = "T1",factor_name_2="T2",reverse_x = TRUE)
```

---

**plot_youden**

**Plot Youden Design**

Description

Plot a Youden experiment design from agricolae design.youden

Usage

```r
plot_youden(
    design,
    x = "col",
    y = "row",
    factor_name = "varieties",
    labels = "plots",
    width = 1,
    height = 1,
    space_width = 0.95,
    space_height = 0.85,
    reverse_y = FALSE,
    reverse_x = FALSE
)
```

Arguments

design  outdesign from agricolae package
x       Describes the x coordinates of a experiment design
y       Describes the y coordinates of a experiment design
factor_name string Which factor should be used for plotting, needs to be a column in outdesign$book
labels  string Describes the column from that the plots are taken to display them
**test_input_height**

Test if input for height is numeric

---

**Description**

Test if input is numeric for field height

**Usage**

```r
test_input_height(x)
```

**Arguments**

- `x` input to be tested

**Value**

- `error`

**Examples**

```r
library(agricolaeplotr)
test_input_height(5)
```
test_input_ncols  checks matrix column input

Description
checks if input is suitable for matrix column indication

Usage
test_input_ncols(x)

Arguments
x  input to be tested

Value
error

Examples
library(agricolaeplotr)
test_input_ncols(9)

---

test_input_nrows  checks matrix rows input

Description
checks if input is suitable for matrix row indication

Usage
test_input_nrows(x)

Arguments
x  input to be tested

Value
error

Examples
library(agricolaeplotr)
test_input_nrows(10)
test_input_reverse_x  Test if input is a logical

description
  Test if input is a logical

usage
  test_input_reverse_x(x)

arguments
  x  input to be tested

value
  error

examples
  library(agricolaeplotr)
  test_input_reverse_x(TRUE)


test_input_reverse_y  Test if input is a logical

description
  Test if input is a logical

usage
  test_input_reverse_y(x)

arguments
  x  input to be tested

value
  error

examples
  library(agricolaeplotr)
  test_input_reverse_y(TRUE)
test_input_width

Test if input for width is numeric

description
Test if input is numeric for field width

usage

\texttt{test_input_width(x)}

arguments

\begin{itemize}
  \item \texttt{x} \quad \text{input to be tested}
\end{itemize}

value

\texttt{error}

examples

\begin{verbatim}
library(agricolaeplotr)
test_input_width(3)
\end{verbatim}

test_names_design

Test of experimental design

description
Test if the outdesign file contains book and parameter list

usage

\texttt{test_names_design(design)}

arguments

\begin{itemize}
  \item \texttt{design} \quad \text{design from agricolae package}
\end{itemize}

value

\texttt{error}
Examples

library(agricolaeplotr)
library(agricolae)
trt<-c(2,4)
k=6
outdesign<-design.ab(trt, r=k, serie=3, design='rcbd')
test_names_design(outdesign)

test_name_in_column('B',outdesign)

Description

Test if input is in column names of a table

Usage

test_name_in_column(x, design)

Arguments

x string input
design design from agricolae package

Value

error

Examples

library(agricolaeplotr)
library(agricolae)
trt<-c(2,4)
k=6
outdesign<-design.ab(trt, r=k, serie=3, design='rcbd')
test_name_in_column('B',outdesign)
test_string  

*Test if input is a string*

**Description**

Test if input is a string

**Usage**

test_string(x)

**Arguments**

x  
input to be tested

**Value**

error

**Examples**

library(agricolaeplotr)
test_string('smallstring')

theme_poster  

*ggplot2 theme for poster presentation*

**Description**

This theme is designed to increase font size to ensure readability on poster presentations

**Usage**

theme_poster()

**Value**

ggplot2 theme
**Examples**

```r
library(agricolaeplotr)
library(agricolae)
T1 <- c('a', 'b', 'c', 'd', 'e', 'f', 'g')
T2 <- c('v', 'w', 'x', 'y', 'z')
r <- 4
outdesign2 <- design.split(trt1 = T1, trt2 = T2, r = r,
                          serie = 2, seed = 0, kinds = 'Super-Duper',
                          randomization = FALSE, first = TRUE, design = 'crd')
plot_split_crd(outdesign2, ncols = 6, nrows = 5) +
theme_poster()
```

---

**theme_pres**

*ggplot2 theme for outdoor presentation*

**Description**

This theme is designed to increase font size to ensure readability on outdoor used devices

**Usage**

```r
theme_pres()
```

**Value**

`ggplot2` theme

**Examples**

```r
library(agricolaeplotr)
library(agricolae)
T1 <- c('a', 'b', 'c', 'd', 'e', 'f', 'g')
T2 <- c('v', 'w', 'x', 'y', 'z')
r <- 4
outdesign2 <- design.split(trt1 = T1, trt2 = T2, r = r,
                          serie = 2, seed = 0, kinds = 'Super-Duper',
                          randomization = FALSE, first = TRUE, design = 'crd')
plot_split_crd(outdesign2, ncols = 6, nrows = 5) +
theme_pres()
```
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