Package 'GGEBiplotGUI'

February 17, 2016

Type Package

Title Interactive GGE Biplots in R

Version 1.0-9

Date 2016-02-02

Author Elisa Frutos Bernal <efb@usal.es>, Purificacion Galindo Villardon <pgalindo@usal.es>

Description Description: A GUI with which to construct and interact with GGE biplots.

Maintainer Elisa Frutos Bernal <efb@usal.es>

Depends R (>= 3.2.2), rgl (>= 0.95.1441), tcltk (>= 3.2.2), tkrplot (>= 0.0-23)

SystemRequirements BWidget

License GPL (>= 2)

LazyData yes

NeedsCompilation no

Repository CRAN

Date/Publication 2016-02-17 17:21:30

R topics documented:

GGEBiplotGUI-package   *GGEBiplotGUI: Interactive GGE Biplots in R*

Description

A GUI with which to construct and interact with GGE biplots.

Details

Package:	GGEBiplotGUI
Type:	Package
Version:	1.0-9
Date:	2016-02-02
License:	GPL (>=2)

The GGEBiplotGUI package provides a graphical user interface for the construction of, interaction with, and manipulation of GGE biplots in R. Some of the functions of the package are: (i) ranking the cultivars based on their performance in any given environment, (ii) ranking the environments based on the relative performance of any given cultivar, (iii) comparing the performance of any pair of cultivars in different environments, (iv) identifying the best cultivar in each environment, (v) grouping the environments based on the best cultivars, (vi) evaluating the cultivars based on both average yield and stability and (vii) evaluating the environments based on both discriminating ability and representativeness. Three-dimensional biplots are incorporated via the rgl package. GGEBiplotGUI is designed to run under any of the major platforms (Windows, Linux and MacOS X). It will be necessary to install the toolkit "bwidget".

Author(s)

Elisa Frutos Bernal <efb@usal.es> Purificacion Galindo Villardon <pgalindo@usal.es> Maintainer: Elisa Frutos Bernal <efb@usal.es>

GGEBiplot   *GGEBiplotGUI: Interactive GGE Biplots in R*

Description

The GGEBiplotGUI package provides a graphical user interface for the construction of, interaction with, and manipulation of GGE biplots in R. Some of the functions of the package are: (i) ranking the cultivars based on their performance in any given environment, (ii) ranking the environments based on the relative performance of any given cultivar, (iii) comparing the performance of any pair of cultivars in different environments, (iv) identifying the best cultivar in each environment, (v) grouping the environments based on the best cultivars, (vi) evaluating the cultivars based on both average yield and stability and (vii) evaluating the environments based on both discriminating ability and representativeness. Three-dimensional biplots are incorporated via the rgl package.

Usage

```
GGEBiplot(Data)
```

Arguments

Data   A data frame or matrix

Author(s)

Elisa Frutos Bernal <efb@usal.es> Purificacion Galindo Villardon <pgalindo.es>

References

Gabriel, K. R. (1971) "The biplot graphical display of matrices with application to principal component analysis." *Biometrika*, **58**, 453-467. Galindo, M. P. (1986) "Una alternativa de representacion simultanea: HJ-Biplot." *Questiio*, **10(1)**, 13-23. Yan W, Hunt LA, Sheng Q, Szlavnics Z (2000). "Cultivar evaluation and mega-environment investigation based on GGE biplot." *Crop Sci*, **40**, 597-605. Yan W, Kang M (2003). "GGE Biplot Analysis: A Graphical Tool for Breeders, Geneticists, and Agronomists." *CRC Press, Boca Raton, FL, USA*.

Examples

```
data(Ontario)
GGEBiplot(Data = Ontario)
```

Ontario   *Ontario winter wheat (1993)*

Description

The sample data are yields from the 1993 Ontario winter wheat (Triticum aestivum L.) performance trials, in which 18 cultivars were tested at nine locations (Yan and Kang 2003).

Usage

```
data(Ontario)
```

Format

A data frame with 18 observations on the following 10 variables.

Source

Yan W, Kang MS (2003). "GGE Biplot Analysis: A Graphical Tool for Breeders, Geneticists, and Agronomists." *CRC Press, Boca Raton, FL, USA*.

Examples

```
data(Ontario)
```

Index