

Package ‘IndexWizard’

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Type Package

Title Constructing and Analyzing Complex Selection Indices

Version 0.2.1.0

Description Allows the construction selection indices based on estimated breeding values in animal and plant breeding and to calculate several analytic measures around to assess its impact on genetic and phenotypic progress. The methodology thereby allows to analyze genetic gain of traits in the breeding goal which are not part of the actual index and automatically computes several analytic measures. It further allows to retrospectively derive realized economic weights from observed genetic trends. The framework is described in Simianer, H., Heise, J., Rensing, S., Pook, T. Geibel, J. and Reimer, C. (2023) <[doi:10.1186/s12711-023-00807-0](https://doi.org/10.1186/s12711-023-00807-0)>.

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Encoding UTF-8

RoxygenNote 7.2.3

Suggests knitr, rmarkdown

VignetteBuilder knitr

URL <https://github.com/johannesgeibel/IndexWizard>

BugReports <https://github.com/johannesgeibel/IndexWizard/issues>

NeedsCompilation no

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Contents

print.SelInd	2
SelInd	3
summary.SelInd	4
Index	6

print.SelInd	<i>Function to nicely print a SelInd object</i>
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Description

Function to nicely print a SelInd object

Usage

```
## S3 method for class 'SelInd'
print(x, ...)
```

Arguments

x	An object of class SelInd
...	does nothing, only for compatibility with the generic function

Value

No return value, only prints formatted output.

Examples

```
tn <- c("RZM", "RZN", "RZEo")
G <- matrix(
  c(1.0,0.13,0.13,
    0.13,1.0,0.23,
    0.13,0.23,1.0),
  3, 3, dimnames = list(tn,tn)
) * 144
w <- c(0.7, 0.3, 0)
names(w) <- tn
r2 <- c(0.743, 0.673)
names(r2) <- tn[1:2]
res <- SelInd(
  w = w,
  G = G,
  r2 = r2
)
print(res)
```


Value

A list of class SelInd

Examples

```
tn <- c("RZM", "RZN", "RZEo")
G <- matrix(
  c(1.0,0.13,0.13,
    0.13,1.0,0.23,
    0.13,0.23,1.0),
  3, 3, dimnames = list(tn,tn)
) * 144
w <- c(0.7, 0.3, 0)
names(w) <- tn
r2 <- c(0.743, 0.673)
names(r2) <- tn[1:2]
SelInd(
  w = w,
  G = G,
  r2 = r2
)
```

summary.SelInd

Function to summarize the content of a SelInd object.

Description

Function to summarize the content of a SelInd object.

Usage

```
## S3 method for class 'SelInd'
summary(object, ...)
```

Arguments

object	An object of class SelInd
...	does nothing, only for compatibility with the generic function

Value

No return value, only prints a summary of the SelInd object.

Examples

```
tn <- c("RZM", "RZN", "RZEo")
G <- matrix(
  c(1.0,0.13,0.13,
    0.13,1.0,0.23,
    0.13,0.23,1.0),
  3, 3, dimnames = list(tn,tn)
) * 144
w <- c(0.7, 0.3, 0)
names(w) <- tn
r2 <- c(0.743, 0.673)
names(r2) <- tn[1:2]
res <- SelInd(
  w = w,
  G = G,
  r2 = r2
)
summary(res)
```

Index

print.SelInd, 2

SelInd, 3

summary.SelInd, 4