

Breeding Scheme Language

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Description

Package: BreedingSchemeLanguage

Type: Package

Title: Describe and simulate breeding schemes

Version: 1.0

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Description: Users can simulate their planned breeding schemes by using functions that imitate events in breeding.

License: GPL-3

Depends: R ($\geq 3.0.0$), Rcpp ($\geq 0.11.0$), snowfall

Imports:

ggplot2,

rrBLUP

LinkingTo: Rcpp

LazyLoad: yes

NeedsCompilation: yes

RoxygenNote: 5.0.1

Introduction

This documentation describes how to start and use the R package “BreedingSchemeLanguage”. BreedingSchemeLanguage (BSL) was developed for breeders to conduct breeding simulations in a simple and flexible system. Users can use BSL under the R environment.

The BSL utilizes the coalescent-based whole genome simulator “GENOME” (Liang et al., 2006) to simulate a founder population for simulation.

If you use the program, the appropriate citation is:

_____.

Reference for GENOME:

Liang L., Zöllner S., Abecasis G.R. (2006) GENOME: a rapid coalescent-based whole genome simulator

Required environment

Downloading and installing R is necessary to use the package. Users can download R on the web page:

The Comprehensive R Archive Network (CRAN) <https://cran.r-project.org>

The BSL package needs Rtools or Xcode for windows and Mac PC, respectively. These tools are used to install the BSL package from GitHub(<https://github.com>) and to compile C++ code on your PC. Compiling C++ code is automatically done when you install the BSL package.

Rtools: <https://cran.r-project.org/bin/windows/Rtools/>

Xcode: Mac App Store (You need your “Apple ID”.)

Install BreedingSchemeLanguage

On your R screen, you can write the code as below:

```
install.packages("devtools")          # only at the first time  
library(devtools)  
install_github("syabe/BreedingSchemeLanguage")      # only at the first time  
library(BreedingSchemeLanguage)
```

Once you install the package, the first and second sentences can be removed.

If you asked the mirror cite when you conduct the code, please chose one place you prefer.

Now, you can use “Breeding Scheme Language” on your PC!

Describe breeding scheme

You can call help page by two types of code:

?FUNCTION

help(FUNCTION)

FUNCTION should be replaced with the name of function you hope to ask.

This manual is currently being prepared.