

Modelling plant resistance deployment: the R package {landespi}

Loup Rimbaud ^{*} Julien Papaix [†] Jean-François Rey [‡] Jean-Loup Gaussen [§]
Marta Zafarroni [¶]

Modelling plant resistance deployment: the R package {landespi}

The R package {landsepi} provides a general modelling framework to help compare plant resistance deployment strategies and understand the impact of epidemiological, evolutionary and genetic factors for a wide range of pathosystems. The model is based on stochastic geometry for describing the landscape and the resistant hosts, a dispersal kernel for the dissemination of the pathogen, and a SEIR (Susceptible-Exposed-Infectious-Removed) architecture to simulate plant response to disease. The package includes a web interface, coded in R-Shiny, for pedagogical purposes.

Mots-clefs : Modélisation – Pathologie Végétale– Package

Développement

Poster format portrait

Références

- <https://cran.r-project.org/web/packages/landsepi/>
- <https://hal.inrae.fr/hal-03368375/>

^{*}PV - Unité de Pathologie Végétale - INRAE, loup.rimbaud@inrae.fr

[†]BioSP - Biostatistique et Processus Spatiaux - INRAE, julien.papaix@inrae.fr

[‡]BioSP - Biostatistique et Processus Spatiaux - INRAE, jean-francois.rey@inrae.fr

[§]BioSP - Biostatistique et Processus Spatiaux - INRAE

[¶]UMR SAVE - Santé et agroécologie du vignoble - INRAE, marta.zafarroni@inrae.fr