

Description of Additional Supplementary Files

File name: Supplementary Data 1

Description

Our dataset includes the results of 80 independent experiments reported in 22 articles. The information extracted in each of the selected articles has been integrated in the file `Supplementary Data 1.xlsx`. The dataset has a dimension of 329 rows x 42 columns. Each row identifies each independent plot (i.e., 80 untreated controls, 99 calendar-based strategies and 149 DSS-based strategies, in total 328 plots) and describes it through the information in each column which is as follows:

- **paper:** surname of authors and year of publication
- **paper2:** paper code identifier
- **experiment:** experiment code identifier
- **country:** country where the experiment was conducted. This variable was exploited as a moderator variable aggregated at continent level
- **state:** state/region/province/county where the experiment was conducted
- **locality:** locality where the experiment was conducted
- **longitude:** locality longitude coordinate in decimal degrees
- **latitude:** locality latitude coordinate in decimal degrees
- **koppen_geiger:** Köppen-Geiger climate classification for each experiment based on locality longitude and latitude coordinates. Köppen-Geiger categories were estimated using the function `LookupCZ` implemented in the R package `kgc`
- **year:** year in which the experiment was conducted
- **crop:** crop on which the experiment was conducted. This variable was exploited as a moderator variable aggregated as woody / non-woody crops
- **disease:** disease evaluated
- **pathogen:** pathogen evaluated. This variable was exploited as a moderator variable aggregated as class taxonomic rank. `various` category denotes sooty blotch complex of fungi and `various2` category denotes sooty blotch/flyspeck complex of fungi
- **dss_developer:** denotes if the responsible for the experiment is the developer of the DSS evaluated
- **exp_design:** type of experimental design
- **exp_unit:** type of experimental unit
- **nexp_units:** number of experimental units
- **replicates:** number of replicates
- **organ:** plant organ in which the pathogen/disease was evaluated

- **samplesize**: sample size (i.e., number of organs evaluated)
- **treatment**: type of fungicide treatment applied (untreated, calendar or DSS). This variable was exploited as a baseline variable in the study
- **treatment2**: name of the treatment as described in the paper
- **air_temperature**: 1 denotes that air temperature was considered in the DSS and 0 otherwise
- **leaf_wetness_duration**: 1 denotes that leaf wetness duration was considered in the DSS and 0 otherwise
- **relative_humidity**: 1 denotes that relative humidity was considered in the DSS and 0 otherwise
- **rainfall**: 1 denotes that rainfall was considered in the DSS and 0 otherwise
- **solar_radiation**: 1 denotes that solar radiation was considered in the DSS and 0 otherwise
- **wind_speed**: 1 denotes that wind speed was considered in the DSS and 0 otherwise
- **nsprays**: number of fungicide spray applications. This variable was exploited as a baseline variable in the study
- **incidence**: disease incidence observed (i.e. proportion of diseased organs)
- **fungicide_2**: fungicide program classified as systemic and/or non-systemic
- **fungicide**: fungicide program classified as systemic and/or non-systemic. This variable was exploited as a moderator variable assigning the variable **fungicide_2** also to the corresponding untreated plot in each experiment
- **non**: name of the non-systemic fungicide applied, `none` otherwise
- **non2**: name of the non-systemic fungicide when two non-systemic fungicides were applied, `none` otherwise
- **sys**: name of the systemic fungicide applied, `none` otherwise
- **sys2**: name of the systemic fungicide when two systemic fungicides were applied, `none` otherwise
- **sys3**: name of the systemic fungicide when three systemic fungicides were applied, `none` otherwise
- **fracnon**: FRAC code corresponding to the **non** fungicide
- **fracnon2**: FRAC code corresponding to the **non2** fungicide
- **fracsys**: FRAC code corresponding to the **sys** fungicide
- **fracsys2**: FRAC code corresponding to the **sys2** fungicide
- **fracsys3**: FRAC code corresponding to the **sys3** fungicide