Package: DegreeDayCalc (via r-universe)

October 16, 2026

Type Package

Title Degree-Day Phenology Calculator ('shiny' Application)

Version 0.1.1

Description Provides a 'shiny' application to compute daily and cumulative degree-days from minimum and maximum temperatures using average, single triangle, and single sine methods, with optional upper temperature thresholds. The application maps cumulative thermal accumulation to user-defined developmental stage thresholds and supports exporting tabular and graphical outputs. The degree-day approach follows assumptions described by Higley et al. (1986) <doi:10.1093/ee/15.5.999>.

License MIT + file LICENSE

Encoding UTF-8

RoxygenNote 7.3.3

Depends R (>= 4.1)

Imports shiny, DT, ggplot2, readxl

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

NeedsCompilation no

Author Victor Manuel Almaraz Valle [aut, cre] (ORCID: <https://orcid.org/0000-0002-3673-8002>), J. Concepción Rodríguez Maciel [aut], Gustavo Ramírez Valverde [aut], Jaime Alfredo Urzua Gutierrez [aut], Manuel Alejandro Tejeda Reyes [aut]

Maintainer Victor Manuel Almaraz Valle <almarazkrae@gmail.com>

Config/pak/sysreqs cmake make libuv1-dev zlib1g-dev

Repository https://almarazkrae-4081.r-universe.dev

Date/Publication 2026-07-02 05:00:02 UTC

RemoteUrl https://github.com/cran/DegreeDayCalc

RemoteRef HEAD

RemoteSha 14b7fde83e56bf99a066d824448ae08001538cc0

Contents

degree_days 2
DegreeDayCalc 3

Index **4**

`degree_days` *Compute degree-days from daily minimum and maximum temperatures*

Description

Calculates daily degree-days (thermal units) from Tmin and Tmax using several common methods (average, triangular, sine). Optionally, an upper threshold (Tupper) can be applied in methods supporting it.

Usage

```
degree_days(
  Tmin,
  Tmax,
  Tbase,
  Tupper = NULL,
  method = c("average", "average_cut", "triangle", "triangle_upper", "sine",
    "sine_upper")
)
```

Arguments

`Tmin`	Daily minimum temperature (°C).
`Tmax`	Daily maximum temperature (°C).
`Tbase`	Base (lower developmental threshold) temperature (°C).
`Tupper`	Optional upper temperature threshold (°C). Required for `"triangle_upper"` and `"sine_upper"` methods.
`method`	Degree-day method. One of `"average"`, `"average_cut"`, `"triangle"`, `"triangle_upper"`, `"sine"`, `"sine_upper"`.

Value

A numeric value (degree-days) rounded to 3 decimals.

DegreeDayCalc *DegreeDayCalc*

Description

Launch the DegreeDayCalc Shiny application for degree-day phenology calculations and visualization of cumulative thermal requirements across life stages.

Usage

```
DegreeDayCalc()
```

Value

Runs a Shiny application in the default browser (or viewer).

Examples

```
if (interactive()) {
  DegreeDayCalc()
}
```

Index

degree_days, 2
DegreeDayCalc, 3