Package: rapsimng.decide.nitrogen (via r-universe)

November 22, 2026

Title Analyse APSIM Next Generation Simulation Outputs for Nitrogen Decision

Version 0.1.2

Description Provides functions to analyse Agricultural Production Systems sIMulator ('APSIM') Next Generation simulation outputs to support nitrogen decision under specified environments and management assumptions. The package focuses on transparent, reproducible summarisation of model outputs such as nitrogen requirements, uptake, and efficiency, without performing 'APSIM' simulations, interpreting user intent, or making normative recommendations.

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Encoding UTF-8

Depends R (>= 4.1.0)

Imports dplyr, ggplot2, tibble, rlang, stats, knitr, rapsimng.decide.core (>= 0.1.2)

Suggests here, quarto, testthat (>= 3.0.0)

Config/testthat/edition 3

URL https://nitrogen.decide.rapsimng.bangyou.me/, https://github.com/byzheng/rapsimng.decide.nitrogen

BugReports https://github.com/byzheng/rapsimng.decide.nitrogen/issues

Config/roxygen2/version 8.1.1

NeedsCompilation no

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Repository https://cran.r-universe.dev

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RemoteUrl https://github.com/cran/rapsimng.decide.nitrogen

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`document` *Document sowing window suitability from APSIM NG outputs*

Description

Analyse APSIM NG outputs already loaded into R to assess sowing window suitability under a defined environment and sowing window; returns a structured decision report.

Usage

```
document(data, context = list(), criteria = list(), options = list(), ...)
```

Arguments

`data`	data.frame/tibble of APSIM outputs.
`context`	list controlling variable mapping and reporting context.
`criteria`	list controlling decision criteria, including optional risk and filtering thresholds.
`options`	list controlling output toggles and figure behaviour.
`...`	additional values stored in report metadata for downstream use.

Value

A list with class `"rapsimng_decide_report"` containing four named components:

- `meta`: metadata describing the decision context and execution.
- `metrics`: summary metrics produced by the decision workflow.
- `tables`: tabular outputs ready for reporting.
- `figures`: figure objects, specifications, or references for visual output.

`evaluate` *Evaluate sowing window suitability from APSIM NG outputs*

Description

Analyse APSIM NG outputs already loaded into R to assess sowing window suitability under a defined environment and sowing window; returns a structured decision report.

Usage

```
evaluate(data, context = list(), criteria = list(), options = list(), ...)
```

Arguments

`data`	data.frame/tibble of APSIM outputs.
`context`	list controlling variable mapping and reporting context.
`criteria`	list controlling decision criteria, including optional risk and filtering thresholds.
`options`	list controlling output toggles and figure behaviour.
`...`	additional values stored in report metadata for downstream use.

Value

A list with class `"rapsimng_decide_report"` containing four named components:

- `meta`: metadata describing the decision context and execution.
- `metrics`: summary metrics produced by the decision workflow.
- `tables`: tabular outputs ready for reporting.
- `figures`: figure objects, specifications, or references for visual output.

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