Package 'morrowplots'

May 9, 2026

Title Historical Agricultural Data from the University of Illinois

Version 0.2.0

Description Agricultural data for 1888-2021 from the Morrow Plots at the University of Illinois. The world's second oldest ongoing agricultural experiment, the Morrow Plots measure the impact of crop rotation and fertility treatments on corn yields. The data includes planting information and annual yield measures for corn grown continuously and in rotation with other crops, in treated and untreated soil.

License MIT + file LICENSE

Encoding UTF-8

RoxygenNote 7.3.2

Depends R (>= 2.10)

LazyData true

Suggests dplyr, ggplot2, knitr, rmarkdown

VignetteBuilder knitr

URL https://SandiCal.github.io/morrowplots/, https://github.com/SandiCal/morrowplots

BugReports https://github.com/SandiCal/morrowplots/issues

NeedsCompilation no

Author Sandi Caldrone [cre, aut, cph] (ORCID: <https://orcid.org/0000-0001-6392-5279>), Heidi Imker [aut, cph] (ORCID: <https://orcid.org/0000-0003-4748-7453>), Josh Henry [aut, cph] (ORCID: <https://orcid.org/0000-0002-7826-5960>), Brooke Anderson [ctb]

Maintainer Sandi Caldrone <caldron2@illinois.edu>

Repository CRAN

Date/Publication 2025-01-08 21:40:02 UTC

Contents

`morrowplots` *Morrow Plots Yield and Treatment Data*

Description

Yield and treatment data for the historic Morrow Plots at the University of Illinois at Urbana Champaign from 1888–2021.

Usage

```
morrowplots
```

Format

A dataframe containing and 3216 rows with the following 26 variables:

phase An integer between 1-5 that describes the important stages of the experiment when plot size, crop rotation or treatments changed.

year Date in YYYY format for year crops were planted and harvested.

plot Character string that indicates the plot number, North/South location, and A/B/C/D subplot (see Data Sources section above for an important note about plot names); values are 3NA; 3NB; 3NC; 3ND; 3SA; 3SB; 3SC; 3SD; 4NA; 4NB; 4NC; 4ND; 4SA; 4SB; 4SC; 4SD; 5NA; 5NB; 5NC; 5ND; 5SA; 5SB; 5SC; 5SD

plot_num Integer of 3, 4, or 5 for the plot number without subplot indicators.

plot_dir Character string that indicates the north/south and east/west direction; values are NE, NW, SE, or SW.

rotation An integer of 1, 2, or 3 that describes the year in the crop rotation schedule.

corn A true or false variable to make it easy to group corn in rotation and continuous corn.

crop Character string that for the crop planted with separate values for corn in rotation and continuous corn; values are A (alfalfa), C (corn), CC (continuous corn), H (hay), O (oats), or S (soybean).

variety Character string with free text of the crop variety name.

all_corn A true or false variable indicating whether this was a year when corn was planted in all plots.

yield_bush Integer value of yeilds for all crops except hay in bushels/acre.

yield_ton Integer value of yeild of hay in tons/acre.

treated A true or false variable indicating whether or not this plot was treated that year.

treatment Character string that describes the treatment plan for this plot; values are none, MLrP, MLbP, 0LNsPK, MLrPNsPK, LNPK, LHNPK, or MLP.

manure An integer for the specific amount of manure applied to this plot this year in lbs/plot.

lime An integer for the specific amount of lime applied to this plot this year in tons/acre

nit An integer for the specific amount of nitrogen applied to this plot this year in lbs/acre.

p205 An integer for the specific amount of phosphorus (on an oxide basis) applied to this plot this year in lbs/acre.

k20 An integer for the specific amount of potassium (on an oxide basis) applied to this plot this year in lbs/acre.

stover An integer for the amount of stover or straw removed in tons/acre.

population An integer for the number of plants based on counts from hand harvesting in plants/acre.

plant_date Date the crop was planted in MM/DD/YYYY format.

plant_day An integer that indicates the nth day in the year that the crop was planted.

soil_sample A true or false variable that indicates whether there is at least one soil sample for this plot and year.

damage Character string with free text describing known sources of significant damage to crops that year.

notes Character string with free text for any notes that do not fit in other fields.

Source

Dataset published in the Illinois Data Bank at doi.org/10.13012/B2IDB-7865141_V2

Index