

# Package ‘morrowplots’

May 7, 2024

**Title** Historical Agricultural Data from the University of Illinois

**Version** 0.1.0

**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.

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**Encoding** UTF-8

**RoxygenNote** 7.3.1

**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

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**Repository** CRAN

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morrowplots

*Morrow Plots Yield and Treatment Data*


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### 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/acre.

**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**

Published dataset in the Illinios Data Bank [doi.org/10.13012/B2IDB-7865141\\_V1](https://doi.org/10.13012/B2IDB-7865141_V1)

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