



# **PUBLISHING AGRICULTURAL DATA FROM THE MORROW PLOTS**

The Value and Logistics of Preserving a Long-  
Term Research Experiment

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View of Morrow Plots in Summer, ca. 1992, University of Illinois Archives.



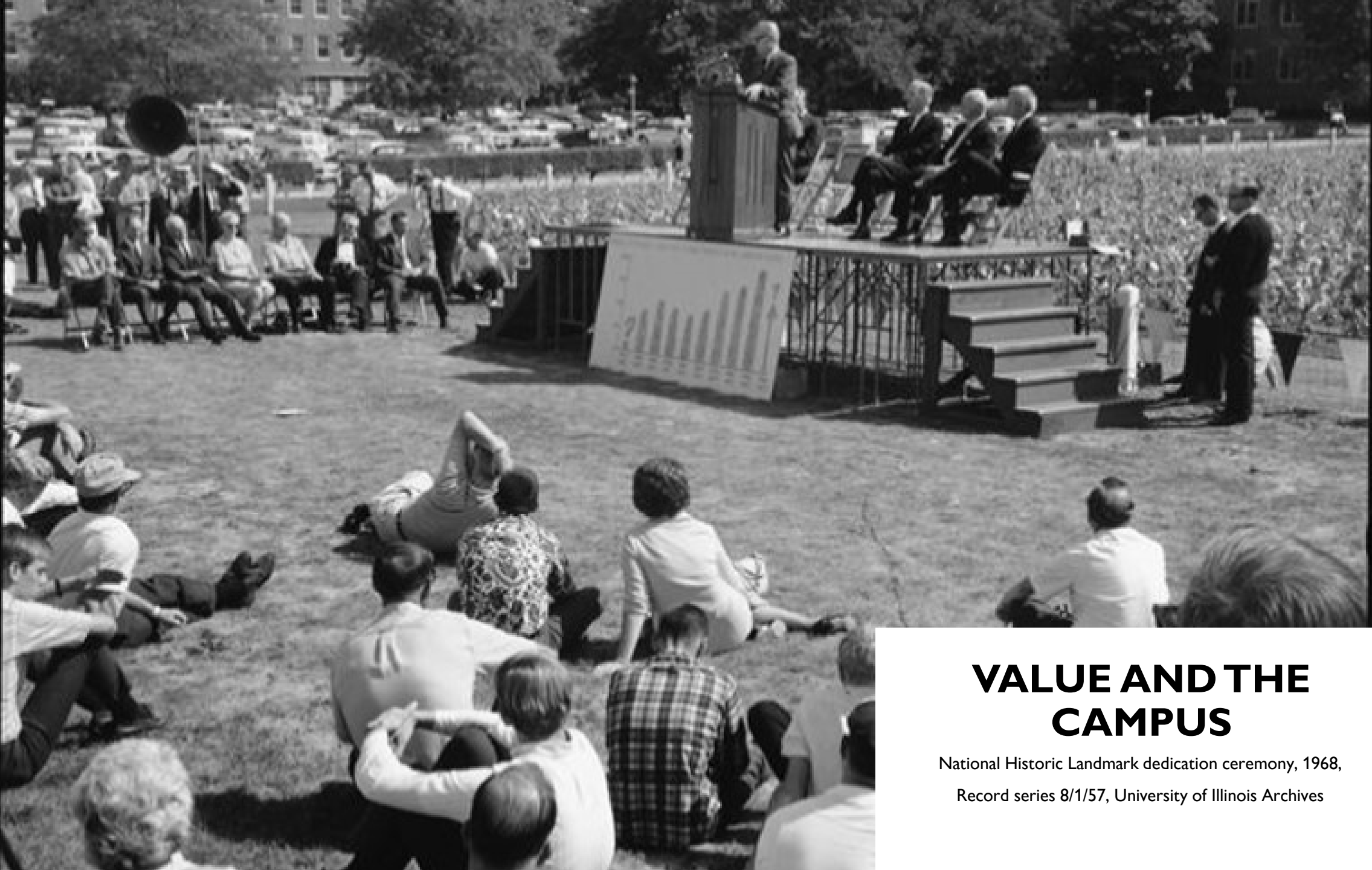


# THE EXPERIMENT

Crop rotation and nutrient management  
since 1876

Recording the Results of the Corn  
Harvest, ca. 1963, University of Illinois  
Archives



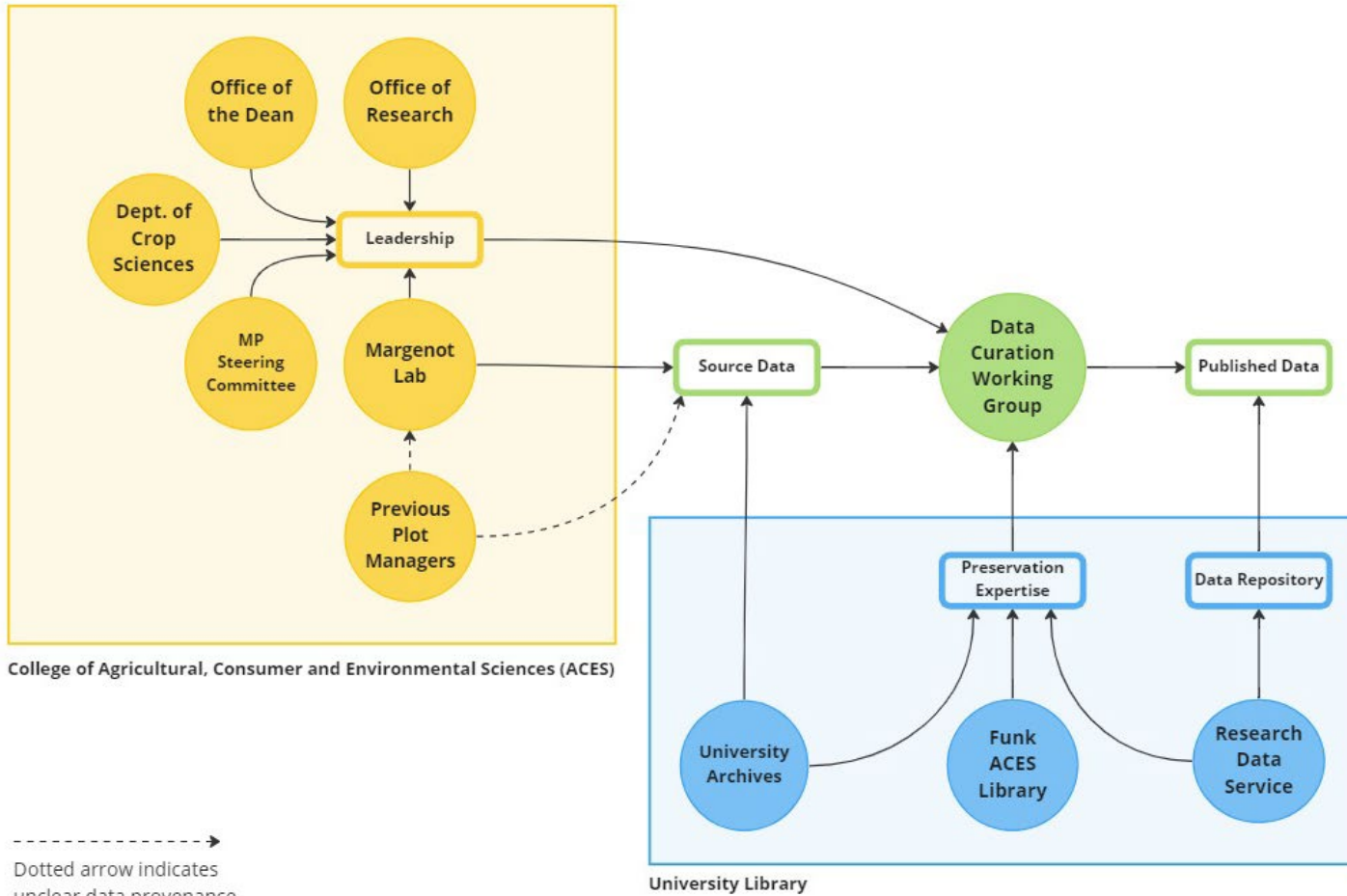


## **VALUE AND THE CAMPUS**

National Historic Landmark dedication ceremony, 1968,  
Record series 8/1/57, University of Illinois Archives



## Data Curation Working Group Stakeholders



# THE WORKING GROUP

## Building the Team

- Beginning in 2018, in preparation for the 2026, sesquicentennial.
- Early acknowledgement that this would take a team
- Building the team
  - College of Agricultural, Consumer, and Environmental Sciences Funk Library,
  - Research Data Service
  - UI Archives
  - 2022 partnered with Margenot Lab
- Organized around an output – publishing the data



# ENGAGING THE COLLEGE OF ACES

College of Agricultural, Consumer,  
& Environmental Science

- Bibliographic research to identify stakeholders
- Interviews of stakeholders to identify sources of data
- Interface with Morrow Plots administrative steering committee
- Updating and engaging stakeholders with progress and outputs
- Partnering with the researchers (The Soils Lab)

Petit and Hopkins Taking a Soil Sample in the Morrow Plots, ca. 1896-1903, University of Illinois Archives.



## tin Board

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Bulletin Board ap-  
first page to go to  
for this column must  
o the editorial office  
Illini before 5 o'clock  
on. They cannot be  
used at a later hour

# SOUTH FARM PLOTS OLDEST IN AMERICA

Forty-One Years of Experimentation Bring High Yield Of Corn

The results of these experiments have been quoted all over the world as authoritative statistics on soil fertility.

WOMEN HOLD FOOD EXCHANGE  
Women of the Congregational church will hold a food exchange at Spaulding's drug store this afternoon. Baked goods of every kind as well as salads and baked beans may be purchased.

# THE ARCHIVES

Maintaining a Historical and Scientific Record of Agriculture

- Distinct program to document science and technology
- Strong institutional focus on history of agriculture tied to land-grant mission and development of agricultural experiment station and extension service
- Archives' strength in administrative records and historical data found in a variety of formats (e.g., research notebook, Experiment Station Bulletins, Board of Trustees minutes, etc.)



# VALUE AND THE ARCHIVES

- The data is valuable for a wide array of historical and scientific research purposes – e.g., studying the university's scientific heritage, research on climate change and ecological shifts, etc.
- Identifying historical data can be challenging given the variety of sources in which it is found
- Archivists have a vital role in appraising and creating access to historical data
- Collaborations are also key to identifying, appraising, and creating access to historical data

Morrow Plots Notebook, 1876-1913, 1967, Record series 8/6/16,  
University of Illinois Archives



<sup>30</sup> 1890 - Plot 1 - Corn.  
The plot has been in corn con-  
tinuously since 1876.  
April 7-8. Spread fairly well rot-  
ted manure on plot 1. [No amount  
recorded].  
April 10. Plowed plot 1.  
May 1. Disked plot once both ways,  
harrowed once, and marked.  
May 2. Planted to Burr's white  
corn, 4 kernels to the hill. Planted  
by hand and covered with a hoe.  
May 22. Cultivated with the Daisy  
8-shovel cultivator. Larger than  
on plots 2 to 4.  
June 3. Cultivated with Lower.  
" 17. Cultivated with Lower.  
Corn much in advance of that  
on plots 2 to 4.  
June 23. Cultivated with Lower.  
" 25. Removed weeds with hoe.  
" 27. Corn about 6 ft. high.  
Less difference between plots 1+2,  
and more difference between 2+3  
than heretofore.  
Sept. 18. Cut and shocked corn.  
Nov. 7. Husked and weighed corn.



	phase	year	all_corn	plant_date	plant_day	plot	plot_num	plot_dir	rotation	corn	crop	variety	yield_bush
1	1	1888	FALSE	1888-05-04	125	3NA	3	NW	1	TRUE	CC	Burr's White	54.3
2	1	1888	FALSE	1888-05-04	125	3NB	3	NW	1	TRUE	CC	Burr's White	54.3
3	1	1888	FALSE	1888-05-04	125	3NC	3	NE	1	TRUE	CC	Burr's White	54.3
4	1	1888	FALSE	1888-05-04	125	3ND	3	NE	1	TRUE	CC	Burr's White	54.3
5	1	1888	FALSE	1888-05-04	125	3SA	3	SW	1	TRUE	CC	Burr's White	54.3
6	1	1888	FALSE	1888-05-04	125	3SB	3	SW	1	TRUE	CC	Burr's White	54.3
7	1	1888	FALSE	1888-05-04	125	3SC	3	SE	1	TRUE	CC	Burr's White	54.3

# THE DATA

## Cleaning, Compiling, and Documenting

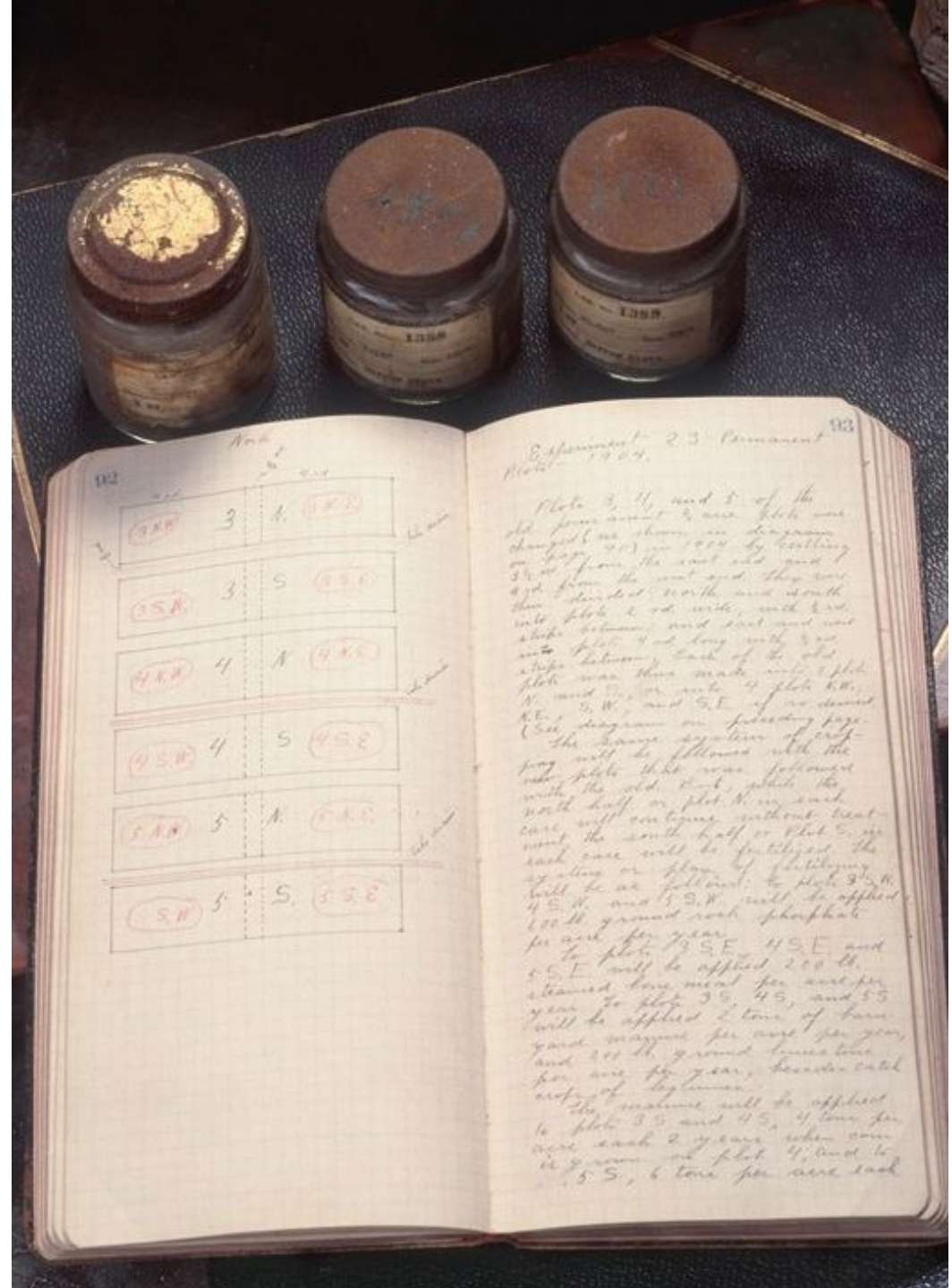
- Supplemented tabular data with details gleaned from archival notebook
- Chose a Tidy data format for clarity and interoperability
- Judgement calls informed by domain scientists
  - Are sparse variables still useful?
  - What to do with conflicting units of measurement?
  - Added distinctions and flags that support analysis
    - Corn vs. continuous corn
    - Treated T/F
    - All-corn years



# VALUE AND THE RESEARCH DATA SERVICE

- Institutionally important dataset in our Illinois Data Bank repository
- Experience curating longitudinal, historical data
- Exemplar dataset to point to
  - Tidy data format
  - Extensive documentation
  - Suitable for research and classroom use

Research books (logs books) with data and observations for early research done at the Morrow Plots. photo by David Riecks. c. 1997, University of Illinois Archives.



# THE ADMINISTRATORS

## Closing the Last Loops

- Kept administrators informally informed throughout
- Once ready to publish the dataset, contacted our respective administrators with an update and open questions
- No surprises -> joint celebration!



Dr. Hopkins at the Morrow Plots, 1904, Record series 39/2/20, University of Illinois Archives



Neg. No. 862 -  
Slide No.  
Cut NO.  
Corn, Oat  
years. Dr. Hop  
29, 1904.

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# THANK YOU

Data, documentation and links to  
related resources available at  
[go.illinois.edu/mpdata](http://go.illinois.edu/mpdata)