

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY -- NOMINATION FORM**

FOR NPS USE ONLY

RECEIVED

DATE ENTERED

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC

Morrow Plots

AND/OR COMMON

Morrow Plots

2 LOCATION

STREET & NUMBER

northwest corner of Gregory Dr. and Mathews Ave.

— NOT FOR PUBLICATION

CITY, TOWN

Urbana

CONGRESSIONAL DISTRICT

— VICINITY OF

021 (twenty-first)

STATE

Illinois

CODE

17

COUNTY

Champaign

CODE

019

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
<input type="checkbox"/> DISTRICT	<input checked="" type="checkbox"/> PUBLIC	<input checked="" type="checkbox"/> OCCUPIED	<input checked="" type="checkbox"/> AGRICULTURE	<input type="checkbox"/> MUSEUM
<input type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL	<input type="checkbox"/> PARK
<input type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL	<input type="checkbox"/> PRIVATE RESIDENCE
<input checked="" type="checkbox"/> SITE	PUBLIC ACQUISITION	ACCESSIBLE	<input type="checkbox"/> ENTERTAINMENT	<input type="checkbox"/> RELIGIOUS
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> GOVERNMENT	<input type="checkbox"/> SCIENTIFIC
	<input type="checkbox"/> BEING CONSIDERED	<input type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL	<input type="checkbox"/> TRANSPORTATION
		<input checked="" type="checkbox"/> NO	<input type="checkbox"/> MILITARY	<input type="checkbox"/> OTHER

4 OWNER OF PROPERTY

NAME

(University of Illinois) R.W. Howell, Head, Dept. of Agronomy, College of Agriculture

STREET & NUMBER

CITY, TOWN

Urbana

— VICINITY OF

STATE

Illinois

61801

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE,

REGISTRY OF DEEDS, ETC

Champaign County Courthouse

STREET & NUMBER

CITY, TOWN

Urbana

STATE

Illinois

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

Historic Sites Survey

DATE

FEDERAL STATE COUNTY LOCAL

DEPOSITORY FOR
SURVEY RECORDS

Historic Sites Survey

CITY, TOWN

Washington

STATE

D.C.

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input type="checkbox"/> UNALTERED	<input type="checkbox"/> ORIGINAL SITE
<input type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

There were ten original Morrow Plots, three of which were laid out in 1876 and the rest three years later. They were each $\frac{1}{2}$ acre in size. In 1903 all but three of the plots were discontinued. The following year each of these was reduced to about $\frac{1}{5}$ acre and was divided in half, making a total of six $\frac{1}{10}$ -acre plots. That is how they remain today. The fenced-in area measures 208 x 282 feet.

The plots follow three cropping systems. The two north plots have grown corn continuously since 1876. The two middle plots have been cropped to a corn-oats rotation. Since 1904 catch crops have been seeded in the oats on the southern of these two plots, and plowed down the following spring for corn. Since 1901 the two plots at the south have been cropped to a corn-oats-red clover rotation. Before then, the rotation was corn-corn-oats-meadow-meadow-meadow. Since 1904 one plot of the two in each rotation has received a manure-limestone-phosphorus (MLP) treatment.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input checked="" type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input checked="" type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES 1876

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

Begun in 1876 and enlarged in 1879, the Morrow Plots at the University of Illinois were the first field experiment plots established by a college in the United States. They were reduced in number from 10 to three in 1904. Of great importance in proving that prairie soil could be depleted by the continuous cropping of corn, they continue to provide data on the effect of crop rotation and the impact of organic and chemical nutrients on plant yields.

History

Prof. Manly Miles of the University of Illinois laid out the first soil experiment plots in 1876. They were named after George E. Morrow, Miles' strongest supporter at the University. Three in number, they were each one-half acre in size. The purpose of the experiment was to prove that the continuous growing of corn would deplete prairie soil and, conversely, that crop rotation would increase plant yields. Three years later Prof. George E. Morrow increased the number of plots to 10.

During the early years, university officials periodically reported the results of experimentation to the State Horticultural Society of Illinois, which in turn made it available to farmers throughout the State. Information concerning the experiment also appeared in the college catalogue, but it was not until 1888 that the university began keeping accurate records of crop yields and that knowledge of the testing became widely known. By 1904 the value of the investigation had become conclusively apparent. It was evident beyond a doubt that the depletion of prairie soil was indeed possible and that crop rotation was an effective method of preventing soil exhaustion.

In 1903, officials reduced the number of experimental plots to three in order to provide space for college expansion. Of the remaining plots, only one dated from 1876. The following year, the plots were reduced about one-fifth of an acre and divided in half to make six plots one-tenth of an acre in size. This arrangement has survived to the present day. Also in 1904, college agronomists broadened the scope of investigation by treating the south half of each of the plots with animal fertilizers and other nutrients.

The Morrow Plots show the comparative value of three kinds of cropping systems. The two northern plots have been planted in corn continuously since 1876, the middle plots have been cropped on a corn and oats rotation since 1879, and the two southern plots have been sown alternately with corn, oats, and red clover since 1901. Among other things, experimentation has demonstrated and/or verified that continuous planting of the same crop lowers the productive power of prairie soil, that crop rotation is an effective preventative of soil exhaustion, and that depleted soil can be regenerated by chemical treatment.

9 MAJOR BIBLIOGRAPHICAL REFERENCES

(The University of Illinois Agricultural Experiment Station Bulletin is cited as UIB.)
 Cyril G. Hopkins, "The Fertility in Illinois Soils," UIB 123 (1908).
 C. G. Hopkins, "Crop Rotation for Illinois Soils," UIB 141 (1910).
 Hopkins, "Thirty Years of Crop Rotations on The Common Soils of Illinois," UIB 125 (1908).
 L. M. Smith, "An Experiment in Selecting Corn for Yield," UIB 271 (1925).
 Ernest DeTurk, "Lessons from the Morrow Plots," UIB 300 (1927).
 A. C. True, A History of Agricultural Education in the U.S., 1785-1925 (1929) (cont'd)

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 1.3 acres
 UTM REFERENCES

A	1, 6	3, 9, 5, 5, 2, 0	4, 4, 3, 9, 8, 6, 0	B			
	ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING
C				D			

VERBAL BOUNDARY DESCRIPTION

At present there are six 1/10 acre plots in cultivation at the Morrow Plots. The entire fenced-in area consist of 1.319 acres. This rectangular area, 208 x 282 feet, at the northwest corner of Gregory Drive and Matthews Avenue, comprises the landmark site.

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME / TITLE: Stephen Lissandrello, Historian, Landmarks Survey Project
 ORGANIZATION: Historic Sites Survey, National Park Service DATE: August 8, 1975
 STREET & NUMBER: 1100 L Street, N.W. TELEPHONE: (202) 523-5464
 CITY OR TOWN: Washington STATE: D.C.

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL STATE LOCAL

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service. Designated: MA 123, 1968 date

FEDERAL REPRESENTATIVE SIGNATURE

TITLE

DATE

Boundary Certified: [Signature] Date Nov 22, 1977

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

ATTEST:

KEEPER OF THE NATIONAL REGISTER

DATE

DATE

12/7/77

(NATIONAL HISTORIC LANDMARKS)

(NATIONAL HISTORIC LANDMARKS)

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Although the University of Illinois was the first to establish field experiment plots in the United States, the knowledge gained there in the early years was not widely disseminated. No accurate records of crop yields were kept until after the establishment of the University of Illinois Agricultural Experiment Station in 1888. By that time many colleges had agricultural experiment stations or were conducting informal experiments of a similar kind. Agronomists at Pennsylvania State College were the first to perform field experiments with fertilizers in 1881. The Jordan Plots, however, were destroyed in 1958. At Sanborn Field, established at the University of Missouri in 1888, similar experiments in crop rotation and soil depletion were performed on a somewhat larger scale. Sanborn Field became a National Historic Landmark in 1965.

Yet the investigations made at the University of Illinois loom large in early agricultural research, especially in the area of prairie soils. Most college texts in agronomy mention the experiments conducted there.

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Milton Whitney, Soil and Civilization (1925).

James T. Jardine, "The Rise, Development, and Value of the Agricultural Experiment Station," Oregon Agricultural College, State Agricultural Experiment Station Circular 26 (1922).

Arthur Harris, "Further Studies on the Permanence of Differences in the Plots of an Experimental Field," Journal of Agricultural Research 36 (1928).

The Morrow Plots: UBI 777 (1957).

U.S. Department of Agriculture, Soils and Men (1938)

T. Swam Harding, Two Blades of Grass, A History of Scientific Development in the U.S. (1947).

C. G. Hopkins, Soil Fertility and Agriculture (1910).

Interview of Associate Dean Karl E. Gardner of the College of Agriculture; Dr. Fred H. Turner, Chairman of the University of Illinois Centennial; and Professors Larry B. Miller and M. D. Thorne of the Department of Agronomy of the University of Illinois by John D. McDermott, January 10, 1968, Urbana, Illinois.

McDermott, John D., "The Morrow Plots, Urbana, Illinois," HSS Special Report, March 12, 1968.