Historic Morrow Plots Produce Their Highest Corn Yields in 2003

By R.E. Dunker

Established in 1876 and now the oldest experimental plots in North America, the Morrow Plots at the University of Illinois continue to provide important information on effects of nutrient management, crop rotations, and other production factors. Located in the center of the campus, the plots are seen by thousands of students and others every day, yet few really appreciate the significance of this campus cornfield.

In recent years, the divergence of yields for the different management systems has become dramatic. Highest yields are obtained on the plots with crop rotations. Top yields for plots fertilized with cow manure and those fertilized with commercial fertilizers are approximately the same, and topped 260 bu/A in 2003.

Table 1 illustrates the dramatic impact of crop rotation and fertilization on corn yields. Even in an excellent year like 2003, these two production factors had major effects on yield. These plots have been important to evaluate the long-term impact of fertilization on soil properties and crop yields across different rotations.

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Table 1. Impact of crop rotation and fertilization on corn yield in the Morrow Plots at the University of Illinois, 2003.

Treatment description	Crop rotation		
	Contin. corn	Corn-oats-hay	Corn-soybean
	- - - - - - - - Grain yield, bu/A - - - - - - - -		
No nutrients applied	59	164	104
Lime and N+P+K fertilizers since 1954	170	261	206

Morrow Plots on July 16, 2003 showing differences in tassel emergence.