

Soil variances and its effect upon soybean growth

Percolation rates at various Cambridge Campus Demonstration plot locations

Test site	rate (minutes/cm)	Average rate (minutes/cm)
A	0.692	0.846
	1.00	
B	0.9	1.02
	1.15	
C	1.36	1.36
	1.36	
D	1.26	1.25
	1.24	
E	1.0714	1.0913
	1.1111	
F	1.2	0.84
	0.48	
G	0.56	0.54
	0.51	
H	0.51	0.595
	0.64	
I	0.58	0.51
	0.44	
J	0.514	0.51
	0.587	

Nitrate levels at various Cambridge Campus Demonstration plot locations

Test site	level	Average level
A	L	L
	L	
B	L	L
	L	
C	L	L
	L	
D	L	L
	L	
E	L	L
	L	
F	L	L
	L	
G	L	L
	L	
H	L	L
	L	
I	L	L
	L	
J	L	L
	L	

Nitrogen key:

L= 40 lb A/6" soil

M= 160 lb A/6" soil

H= 320 lb A/6" soil

Phosphorus levels at various Cambridge Campus Demonstration plot locations

Test site	level	Average level
A	0/L	L
	L	
B	L	L
	L	
C	L	L
	L	
D	L	L
	L	
E	L	L/M
	M	
F	L	L
	L	
G	L	L
	L	
H	L	L
	L	
I	M	L/M
	L	
J	L/M	L/M
	L	

Phosphorus key:

L= 8 lb A/6" soil

M= 20 lb A/6" soil

H= 64 lb A/6" soil

Potassium levels at various Cambridge Campus Demonstration plot locations

Test site	level	Average level
A	M	M
	M	
B	H	H
	H	
C	M	M
	M	
D	L/M	L/M
	L/M	
E	H	H/M
	M	
F	H	H
	H	
G	H	H
	H	
H	L	L/M
	L/M	
I	H	H
	H	
J	M	M
	M	

Potassium key:

L= 40 lb A/6" soil

M= 80 lb A/6" soil

H= 160 lb A/6" soil

Soil Moisture at various Cambridge Campus Demonstration plot locations

Test site	level	Average level
A	Low 1	Low 1
	Low 1	
B	Low 1	Low 1
	Low 1	
C	Dry 1	Dry 1
	Dry 1	
D	1	1
	1	
E	Low 1	Low 1
	Low 1	
F	1	1
	1	
G	1	1
	1	
H	1	1
	1	
I	1	1
	1	
J	Low 1	Low 1
	Low 1	

pH levels at various Cambridge Campus Demonstration plot locations

Test site	level	Average level
A	8	7.5
	7	
B	7	7
	7	
C	6	6
	6	
D	6	6
	6	
E	6	6.5
	7	
F	6.0	5.75
	5.5	
G	6	6
	6	
H	6	6
	6	
I	6	6
	6	
J	7	6.5
	6	

Number of Soybean seeds produced at various Cambridge Campus Demonstration plot locations

Test site

Soybean seed count

A	67
B	60
C	89
D	171
E	201
F	81
G	43
H	59
I	139
J	105

GPS coordinates of various sites & site descriptions (including topography)

Site	GPS coordinates	Site description
A	Latitude: 45.568409 Longitude: -93.245805	Near the street with on flat land; from an aerial view soil appears toxic.
B	Latitude: 45.567538 Longitude: -93.245955	Near the street with a slight incline that ran from North to South.
C	Latitude: 45.568153 Longitude: -93.246963	The terrain that was on Site C was sandy with just a little top soil litter and the site was also on a slight incline.
D	Latitude: 45.567387 Longitude: -93.247242	Down in the middle of the valley, flat surface, below rolling hills.
E	Latitude: 45.568259 Longitude: -93.248229	flat
F	Latitude: 45.567462 Longitude: -93.248723	The test site was on an upward slope of a hill closer to the top of it. The soil on the ground appeared to be very sandy and dry. There were some tree groves in the vicinity of the testing site however not close enough to impact the data obtained.
G	Latitude: 45.566802 Longitude: -93.249710	Sandy soil, open field, flat topography.
H	Latitude: 45.566621 Longitude: -93.24993	It was pretty flat ground with a slight slant. It was next to a grove of trees in the middle of the field. There were mushrooms everywhere on our sight as well. It had been harvested already by the time we took our measurements.
I	Latitude: 45.566005 Longitude: -93.247993	It was on the top of a hill, but it was flat on top. The soil on the ground appeared to be very sandy and dry. There was not any trees nearby nor any apparent sources of water.
J	Latitude: 45.566080 Longitude: -93.246963	Located at the top of a gradual slope. Area was flat, sandy and dry. No apparent water source nearby. Not located near a tree line.

