

The Effect of Differences in Soil on Pennycress Growth

Biology 1103-32 Online Environmental Science Lab October 28, 2011

Table 1. Number of Pennycress at Various Cambridge Campus Demonstration Plot Locations (3mx3m)

Test Site	Pennycress Amount (Number Counted)
A	55
B	1291
C	483
D	475
E	996

Table 2. Nitrate Levels at Various Cambridge Campus Demonstration Plot Locations

Test Site	Level	Average Level
A	Trace amounts	Trace amounts
	" "	
	" "	
B	Trace amounts	Trace amounts
	" "	
	" "	
C	Low	Low amounts
	"	
	"	
D	Trace amounts	Trace amounts
	" "	
	" "	
E	Trace amounts	Trace amounts
	" "	
	" "	

Table 3. Phosphorus Levels at Various Cambridge Campus Demonstration Plot Locations

Test Site	Level	Average Level
A	Trace amounts	Trace amounts
	" "	
	" "	
B	Trace amounts	Trace amounts
	" "	
	" "	
C	Trace amounts	Trace amounts
	" "	
	" "	
D	Trace amounts	Trace amounts
	" "	
	" "	
E	Trace amounts	Trace amounts
	" "	
	" "	

Table 4. Potassium Levels at Various Cambridge Campus Demonstration Plot Locations

Test Site	Level	Average Level
A	Low	Low
	"	
	"	
B	Low	Low
	"	
	"	
C	Low	Low
	"	
	"	
D	Low	Low
	Medium	
	Low	
E	Low	Low
	"	
	"	

Table 5. Soil Moisture at Various Cambridge Campus Demonstration Plot Locations

Test Site	Level	Average Level
A	1.5	1.83
	1.5	
	2.5	
B	2.5	2
	1	
	2.5	
C	1	1.5
	2	
	1.5	
D	2.5	2.67
	3	
	2.5	
E	1.5	2
	2.5	
	2	

Table 6. pH Levels at Various Cambridge Campus Demonstration Plot Locations

Test Site	Level	Average Level
A	8	8
	8.5	
	7.5	
B	8.5	8.167
	8	
	8	
C	8	8
	8	
	8	
D	8	8
	8	
	8	
E	9	8.833
	9	
	9.5	

Table 7. Percolation Rates at Various Cambridge Campus Demonstration Plot Locations

Test Site	Rate (mpc)	Average Rate (mpc)
A	3.57	3.13
	2.68	
B	0.42	0.49
	0.56	
C	0.6	0.65
	0.7	
D	0.3	0.36
	0.42	
E	13.02	12.08
	11.14	

Table 8. GPS Coordinates of Various Sites & Site Descriptions (Including Topography)

Site	GPS Coordinates	Site Description
A	N 45 34" 115" W 093 14" 740"	Northeast Corner of 10 acres with road on 2 sides; land flat and little vegetation plot area
B	N 45 34" 101" W 093 14" 833"	Top of the hill; flat land northwest side of the 10 acre lot. Lots of vegetation.
C	N 45 34" 091" W 093 14" 794"	Very top of hill in the middle of the 10 acres. Lots of vegetation.
D	N 45 34" 037" W 093 14" 838"	Lower southwest corner of plot west of tree line; mild vegetation growth, but around plot denser vegetation growth.
E	N 45 34' 029" W 093 14' 749"	Southeast corner of plot next to the tree line, lower level down the slope of the hill. Mild vegetation in plot area.