

Row width: 76 cm  
 Plant population: 52500 plants per hectare  
 Soil: Chalmers silty clay loam

South



Replication 2	Rows	1	Early 3	Early 5	7	Late 9	11	Late 13	15	Rows
		A	B	D	C	B	A	D	C	
Replication 1	4 Border	2	4 Late	6 Late	8	10 Early	12	14 Early	16	4 Border

E = denotes that the plants were inoculated with SCLB on June 28  
 L = denotes that the plants were inoculated with SCLB on July 14  
 A = Pioneer 3306 - N Cytoplasm, Healthy  
 B = Pioneer 3306 - TMS Cytoplasm, Blighted  
 C = Pioneer 3571 - N Cytoplasm, Healthy  
 D = Pioneer 3571 - TMS Cytoplasm, Blighted  
 TMS = denotes Texas male-sterile      N = denotes normal

Figure 2.1. Design of the Corn Blight Experiment

Two hybrids Pioneer 3306 and Pioneer 3571 were chosen for growing corn. One of the objectives of the experiment was to determine if there was any statistically significant difference in the spectral response of the Pioneer 3306 (a type of hybrid) corn and Pioneer 3571 corn. Texas male-sterile cytoplasm (TMS) and normal cytoplasm versions of Pioneer 3306 corn and Pioneer 3571 corn were grown. *Helminthosporium maydis* (*H. maydis*) causes relatively mild infection on corn of normal (N) cytoplasm, but it attacks corn in TMS cytoplasm with unusual virulence which causes southern corn leaf blight. The TMS corn plots 3, 5, 10 and 14 were inoculated with *H. maydis* on July 14.

Dates Data Collected:

Number of Observations Collected

<u>Plot Number</u>	<u>7/11</u>	<u>7/31</u>	<u>8/9</u>	<u>8/17</u>	<u>8/28</u>
1	1	2	-	-	-
2	-	2	1	1	1
3	1	2	1	1	1
4	-	2	1	1	1
5	1	2	1	1	1
6	-	2	1	1	1
7	1	2	-	-	-
8	-	2	1	1	1
9	-	1	1	1	1
10	1	1	1	1	1
11	-	1	-	-	-
12	1	1	1	1	1

Number of Observations Collected (cont.)

<u>Plot Number</u>	<u>7/11</u>	<u>7/31</u>	<u>8/9</u>	<u>8/17</u>	<u>8/28</u>
13	-	1	1	1	1
14	1	1	11	5	1
15	-	1	-	-	-
16	1	1	11	5	1

Level of Factor Codes:

<u>Factor</u>		<u>Level</u>	
<u>Code</u>	<u>Description</u>	<u>Code</u>	<u>Description</u>
1:	Hybrid	1:	Pioneer 3571
		2:	Pioneer 3306
2:	Cytoplasm	1:	Normal
		2:	Texas Male Sterile (TMS)
3:	Innoculation Date (TMS)	1:	Early
		2:	Late