



Plot No.	Trt. Code
433	J
434	T
435	Q
436	L
437	D
438	V
439	R
440	G
441	S
442	F
443	B
444	O
445	I
446	U
447	E
448	K
449	N
450	H
451	M
452	P
453	A
454	C

Wheat

Plot No.	Trt. Code
389	P
390	N
391	H
392	V
393	A
394	C
395	U
396	M
397	Q
398	E
399	R
400	L
401	J
402	S
403	T
404	G
405	I
406	D
407	B
408	O
409	K
410	F

Corn (2)

Plot No.	Trt. Code
345	D
346	R
347	S
348	G
349	T
350	B
351	I
352	L
353	A
354	C
355	K
356	H
357	N
358	P
359	M
360	O
361	J
362	F
363	V
364	E
365	U
366	Q

Soybeans

Plot No.	Trt. Code
301	F
302	E
303	I
304	K
305	O
306	J
307	N
308	H
309	P
310	G
311	D
312	U
313	A
314	Q
315	V
316	L
317	S
318	C
319	T
320	R
321	M
322	B

Corn (1)

455	T
456	G
457	B
458	R
459	O
460	C
461	M
462	D
463	N
464	I
465	K
466	S
467	Q
468	P
469	H
470	J
471	E
472	U
473	A
474	F
475	V
476	L

Soybeans

411	M
412	I
413	N
414	Q
415	L
416	J
417	A
418	U
419	G
420	E
421	P
422	V
423	B
424	F
425	S
426	T
427	K
428	D
429	H
430	R
431	O
432	C

Corn (1)

367	S
368	E
369	L
370	U
371	P
372	H
373	V
374	Q
375	F
376	M
377	R
378	T
379	K
380	D
381	C
382	A
383	I
384	O
385	G
386	J
387	N
388	B

Wheat

323	O
324	A
325	K
326	I
327	F
328	E
329	R
330	T
331	C
332	B
333	H
334	G
335	U
336	J
337	M
338	N
339	V
340	L
341	P
342	Q
343	S
344	D

Corn (2)

Figure 83.1. Design and treatment descriptions of phosphorous and potassium fertilization experiments. Spectral measurements were made on plots marked with an asterik (*).

Table 83.1. Potassium treatments for 1978 corn potassium and phosphorous experiment.

Treatment Code	In Row Applications For					Total
	Broadcast*	Corn-1	Soybeans	Wheat	Corn-2	
	----- lb/ac -----					
A	0	10	0	30	0	40
B	200	0	0	0	0	200
C	200	0	0	0	0	200
D	200	0	0	0	0	200
E	200	0	0	0	0	200
F	600	0	0	0	0	600
G	600	0	0	0	0	600
H	600	0	0	0	0	600
I	200	0	0	0	0	200
J	200	0	0	0	0	200
K	200	0	0	0	0	200
L	600	0	0	0	0	600
M	600	0	0	0	0	600
N	600	0	0	0	0	600
O	0	0	0	0	0	0
P	0	25	0	75	0	100
Q	200	0	0	0	0	200
R	200	0	0	0	0	200
S	200	25	0	75	0	300
T	600	0	0	0	0	600
U	600	0	0	0	0	600
V	600	0	0	0	0	600

* Broadcast applications of K_2O were plowed under for corn-1.

Table 83.2. Phosphorous treatments for 1978 corn potassium and phosphorous experiment.

Treatment Code	Broadcast*	In Row Application For				Total
		Corn-1	Soybeans	Wheat	Corn-2	
----- lb/ac -----						
A	0	10	0	30	0	40
B	0	0	0	0	0	0
C	0	10	0	30	0	40
D	0	25	0	75	0	100
E	0	50	0	150	0	200
F	0	10	0	30	0	40
G	0	25	0	75	0	100
H	0	50	0	150	0	200
I	200	0	0	0	0	200
** J	160	10	0	30	0	200
K	100	25	0	75	0	200
L	200	0	0	0	0	200
** M	160	10	0	30	0	200
N	100	25	0	75	0	200
O	400	10	0	30	0	440
P	400	10	0	30	0	440
Q	400	0	0	0	0	400
** R	400	10	0	30	0	440
S	400	10	0	30	0	440
T	400	0	0	0	0	400
** U	400	10	0	30	0	440
V	400	25	0	75	0	500

* Broadcast applications of P₂O₅ were plowed under for corn-1.

** P₂O₅ treatments stopped in 1973.

LARSPEC Identification Record Codes

1. Level of Factor Codes

Do not use the level of factor codes as they do not represent the experiment adequately. Refer to Tables 83.1 and 83.2 and Figure 83.1 for a description of the potassium and phosphorous treatments. The experiment is a four year rotation of Corn-Soybeans-Wheat-Corn.

2. Experimenter Parameters

Experimenter parameter 01: Grain yield in kilograms per hectare.

Illumination Conditions for Spectral Data Collection

Date	Day of Year	Time Period		Solar Zenith Angle Range	Solar Azimuth Angle Range	Cloud Cover
		Start	Stop	max - min - max		
		GMT		degrees	degrees	%
6/22	173	17:21	18:14	18 - 17 - 18	158-198	?
6/28	179	16:48	17:26	22 - 18	138-161	10
6/29	180	16:02	16:50	29 - 22	119-139	40-50
¹ 7/5	186	18:42	19:33	20 - 28	214-238	10-20
² 7/5	186	17:34	20:32	18 - 38	166-235	5-20
¹ 7/6	187	16:42	19:08	23 - 18	135-179	2
² 7/6	187	20:48	21:00	41 - 43	258-260	2
7/11	192	16:56	17:17	22 - 20	142-154	5
7/15	196	19:02	20:03	24 - 33	223-245	40-50
7/16	197	16:16	17:21	28 - 20	125-157	10-30
¹ 7/28	209	17:31	19:23	22 - 21 - 29	165-228	5-30
² 7/28	209	19:13	19:21	27 - 28	224-227	30
8/3	215	18:52	19:37	26 - 32	213-232	30
8/4	216	15:34	16:40	38 - 28	117-140	20-35
8/8	220	15:56	16:20	35 - 32	125-133	0
8/16	228	16:06	16:32	35 - 32	131-141	30
8/20	232	18:36	20:31	30 - 45	203-243	10
8/22	234	15:33	16:02	42 - 37	123-132	?
9/5	248	17:35	17:56	34 - 34	175-184	?
9/7	250	16:53	19:42	36 - 34 - 43	157-225	20-35

¹78100803

²78105803

Dates Spectral Data Collected (Exotech 20C):

Plot Number	7/5	7/6	7/15	7/16	7/28	8/3	8/4	8/20	9/7
	Number of Observations Collected								
304	-	1	-	1	1	-	1	1	1
305	-	2	-	2	2	-	2	2	2
308	-	1	-	1	1	-	1	1	1
309	-	2	-	1	1	-	1	2	1
310	-	1	-	2	2	-	3	1	2
318	-	1	-	1	1	-	1	1	1
319	-	2	-	1	1	-	1	2	1
320	-	1	-	2	1	-	2	1	2
322	-	2	-	2	2	-	2	2	2
341	-	1	-	1	1	-	1	1	1
343	-	2	-	2	2	-	2	1	2
401	1	1	1	-	1	1	-	1	1
402	2	2	2	-	2	2	-	2	2
419	2	1	1	-	-	1	-	1	1
421	1	2	2	-	-	2	-	2	2
423	1	1	1	-	-	1	-	1	1
424	1	1	1	-	-	1	-	1	1
425	2	2	2	-	-	2	-	2	2
426	1	1	1	-	-	1	-	1	1
429	1	1	1	-	-	-	-	1	1
430	1	1	1	-	-	-	-	1	1
431	2	2	2	-	-	-	-	1	2
432	1	1	1	-	-	-	-	1	1

Dates Spectral Data Collected (Exotech 100):

Plot Number	6/22	6/28	6/29	7/5	7/6	7/11	7/28	8/8	8/16	8/22	9/5
	Number of Observations Collected										
304	2	2	2	2	-	2	-	2	2	2	2
305	2	2	2	2	-	2	-	2	2	2	2
308	2	2	2	2	-	2	-	2	2	2	2
309	2	2	2	2	-	2	-	2	2	2	2
310	2	2	2	2	-	2	-	2	2	2	2
318	2	2	2	2	-	2	-	2	2	2	2
319	2	2	2	2	-	2	-	2	2	2	2
320	2	2	2	2	-	2	-	2	2	2	2
322	2	2	2	2	-	2	-	2	2	2	2
341	-	2	2	2	-	2	-	2	2	2	2
343	-	2	2	2	-	2	-	2	2	2	2
401	2	2	2	2	2	2	-	2	2	2	2
402	2	2	2	2	2	2	-	2	2	2	2
419	2	2	2	2	2	2	2	2	2	2	2
421	2	2	2	2	2	2	2	2	2	2	2
423	2	2	2	2	2	2	2	2	2	2	2
424	2	2	2	2	2	2	2	2	2	2	2
425	2	2	2	2	2	2	2	2	2	2	2
426	2	2	2	2	2	2	2	2	2	2	2
429	2	2	2	2	2	2	2	2	2	2	2
430	2	2	2	2	2	2	2	2	2	2	2
431	2	2	2	2	2	2	2	2	2	2	2
432	2	2	2	2	2	2	2	2	2	2	2
