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EMPIRE COTTON GROWING CORPORATION.
INCORPORATED BY ROYAL CHARTER.

OFFICES:
KING'S BUILDINGS,
DEAN STANLEY STREET,
MILLBANK, S.W. 1.
CABLES: "EMCOTTON LONDON."

Cotton Experiment Station
Box 95. Barberton
Transvaal
13th October 1936

DMD/deM

Ref.R.19

W.G.Cochran Esq
Rothamsted Experimental Station
Harpenden. Herts.

Dear Mr Cochran,

I am enclosing the data from two uniformity trials as promised in my letter of 25th June 1936. The trial on field B.2.a. was planted with rows 3'6" apart, the interplant spacing in the row being 2'. Adequate guard rows were discarded, the rows divided up into 40' units and harvested separately, the yields being given in grammes of seed cotton.

In field B.5.b. the spacing was 3'6" between rows with 18" spacing in the row, the trial being harvested in units of 30' length of row. In both trials 8' were discarded at both ends of each row to obviate any edge effect.

Actual yields were low for the following reasons-

1. Planting date 6 to 8 weeks later than optimum planting time due to late rains.
2. Severe damage by aphids unevenly distributed over the two fields, and further lowering of the yield by severe drought during February and March.
3. Both the above fields represent the extreme variation in soil fertility present on the Station and are not truly representative of the average soil fertility conditions.

In future Seasons I hope to have a series of trials on more uniform fields, and will forward the data when the crop is reaped. I shall be very pleased to hear the conclusions you have drawn when you have analysed the above data.

I enclose a plan of the lay out of the two trials.
Yours Sincerely *D. McDonald*

EMPIRE COTTON GROWING CORPORATION.

Yield in Gms. Uniformity Trial 1935-36. Field B.2.A

	Series. A	Series B	Series C	Series D
Row. No.,				
1	360	390	370	300
2	460	380	520	390
3	470	380	500	390
4	310	188	340	530
5	280	360	580	520
6	220	590	700	440
7	240	400	640	640
8	160	136 250	530 254 337	650 312 449
9	270	550	650	810 1444
10	470	470	480	860
11	360	310	400	1020
12	230	360	490	890
13	460	380 177	580 330	650
14	430	420	830	900 424 465
15	310	300	1000	780
16	330	286	940 537	980 689 498
17	350	600	690	1090 1825
18	310	320 216	1030	850 524
19	310	480	930 459	920
20	250	420	1000	950 526
21	210	658	800 1351	720 1448
22	240	480	720	750 451
23	350	510	680	770
24	250	227	600 400	760 681 451
25	300	700	630	800 1952
26	410	590	660	710 480
27	370	630	750	690
28	400	620	640	600 470
29	210	720	790	670
30	220	550	810	740 471
31	320	570	570	520
32	380	267	970 582	640 537 452
33	310	550	910	630 1873
	1024	1563	2212	2285
				7664

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Yield in Gms. Uniformity Trial 1935-36. B2A Cont.

Row. No.	Series A.	Series B.	Series C.	Series D
	300	440	780	550
34	300			447
35	500	760	700	560
36	450	660	740	420 479
37	720	760	520	540
38	440	550	470	380 438
39	640	590	580	540
40	450 381	530 484	560 526	570 419 446
41	440	610	380	580
42	300	500	430	570 381
43	400	450	380	530
44	430	560	490	680 392
45	560	400	300	680
46	480	560	490	620 409
47	650	540	570	600
48	400 366	620 424	610 365	750 501 474
49	480	530	410	650
50	310	540	340	540 380
51	410	560	290	500
52	460	580	340	570 371
53	580	500	410	640
54	500	420	600	510 416
55	480	470	610	630
56	570 379	420 402	550 355	460 450 419
57	550	570	500	610
58	630	480	400	580 432
59	550	550	390	570
60	290	540	370	410 367
61	450	470	450	350
62	520	510	320	400 347
63	470	470	300	230
64	440 390	590 418	380 311	230 338 311
65	430	640	460	300
66	470	520	410	270 350

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	<u>Yield in Gms.</u>	<u>Uniformity Trial 1935-36 B.2.A Cont.</u>		
Row No.	Series A.	Series B	Series C	Series D
67	530	670	470	320
68	490	600	480	530 109
69	450	650	380	370
70	510	330	510	480 368
71	420	630	540	430
72	540 384	510 455	530 378	150 285 375
73	330	550	400	250
74	320	410	460	320 304
75	300	540	520	300
76	400	460	450	450 342
77	400	380	680	420
78	490	490	640	460 396
79	340	430	570	460
80	560 314	580 384	640 436	350 301 393
81	440	620	550	430
82	370	600	650	490 415
83	550	530	450	340
84	460	840	440	300 391
85	470	620	440	440
86	400	620	530	410 393
87	550	590	600	380
88	450 369	650 507	320 398	370 316 391
89	390	530	390	300
90	370	740	470	490 368
91	420	660	460	640
92	390	780	540	710 460
93	360	760	590	610
94	550	1080	510	560 502
95	570	930	490	450
96	500 355	730 621	660 411	550 431 488
97	610	500	620	630
98	730	590	570	640 489
99	730	590	460	470

EMPIRE COTTON GROWING CORPORATION.

<u>Yield in Gms</u>	<u>Uniformity Trial 1935-36 B.2.A.cont</u>			
Row.No	Series A.	Series B.	Series.C	Series D.
100	750	560	550	500
101	740	680	480	600
102	680	430	480	600
103	520	500	500	600
104	550 531	430 428	580 424	650 469
105	530	570	600	590
106	550	420	410	450
107	670	500	440	460
108	510	430	460	440
109	290	340	330	570
110	410	460	420	520
111	580	650	390	550
112	510 405	580 395	460 357	510 409
113	540	720	690	690
114	600	710	600	660
115	640	560	510	580
116	670	440	620	630
117	490	570	580	570
118	510	670	930	530
119	620	660	710	760
120	450 452	610 494	520 516	330 475
121	710	730	690	420
122	650	580	610	460
123	640	740	430	550
124	700	770	510	460
125	520	920	560	450
126	600	740	600	570
127	610	690	660	460
128	680 511	940 611	560 462	500 387
129	660	850	410	390
130	850	690	480	400
131	610	730	430	350
132	810	590	430	350

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Yield in Gms. Uniformity Trial 1935-36. B.2.A Cont

Row No.	Series A.	Series B.	Series C.	Series D.
133	610	510	340	400
134	570	610	440	510 399
135	560	550	650	560
136	520 519	320 485	630 381	600 356 439
137	460	250	500	550
138	530	340	480	680 379
139	670	350	580	650
140	460	240	340	500 379
141	560	320	410	390
142	470	340	420	510 342
143	310	240	330	550
144	480 394	460 254	390 345	510 434 327



EMPIRE COTTON GROWING CORPORATION.

Yield in Gms.Uniformity Trial 1935-36. Field B 5 b.

Series A.

Series B.

Series C.

Series D.

Row No.

1 520

540

410

460

2 290

450

440

410

3 420

350

510

340

4 350

330

440

400

5 340

220

400

410

6 360

380

440

360

7 410

430

340

370

8 370

420

160

280

9 400

500

300

390

10 460

500

300

380

11 590

400

560

360

12 530

400

660

480

13 740

450

610

450

14 640

510

860

610

15 630

440

850

510

16 460

450

610

580

17 440

470

720

620

18 420

450

450

750

19 530

490

660

660

20 510

420

460

610

21 440

520

450

540

22 490

490

470

370

23 470

480

520

600

24 460

350

430

600

25 270

320

510

460

26 410

440

480

580

27 380

540

510

630

28 450

560

600

490

29 390

400

540

450

30 330

420

530

510

31 320

360

700

390

32 210

370

620

410

33 340

480

640

520

34 580

380

600

460

Yield in Gms.		Uniformity Trial 1935-36. Field B 5 b. (continued).		
	Series A.	Series B.	Series C.	Series D.
	Row No.			
35	470	490	580	410
36	500	560	650	400
37	530	420	370	470
38	470	540	410	400
39	490	750	570	360
40	600	600	440	480
41	430	630	470	430
42	490	650	360	410
43	440	590	450	350
44	290	540	280	360
45	360	510	500	420
46	320	390	220	320
47	260	360	370	420
48	400	490	280	700
49	390	580	370	390
50	600	530	360	410
51	480	710	480	390
52	620	540	470	460
53	550	600	630	560
54	600	510	560	380
55	520	540	850	480
56	550	570	760	600
57	560	500	810	660
58	380	500	700	690
59	410	400	920	690
60	390	500	630	730
61	370	400	690	650
62	270	610	690	690
63	450	520	510	640
64	440	430	510	690
65	450	640	640	600
66	500	570	540	610
67	530	550	380	430
68	300	640	500	640
69	420	430	500	480

EMPIRE COTTON GROWING CORPORATION.

Uniformity Trial 1935-36. Field B 5 b. (continued).

<u>Yield In Gms.</u>	<u>Series A.</u>	<u>Series B.</u>	<u>Series C.</u>	<u>Series D.</u>
<u>Row No.</u>				
70	390	450	580	440
71	340	680	490	400
72	370	410	490	470
73	450	620	510	450
74	410	590	500	540
75	420	300	680	610
76	410	400	590	780
77	420	410	410	630
78	440	410	450	610
79	390	400	510	570
80	400	340	400	590
81	420	420	400	560
82	360	380	430	480
83	340	380	260	430
84	420	350	460	320
85	370	440	410	310
86	350	370	410	280
87	420	500	340	310
88	330	390	330	340
89	420	620	430	360
90	540	500	320	390
91	550	580	440	460
92	460	440	490	460
93	720	500	520	430
94	420	590	310	360
95	600	480	560	310
96	610	340	320	390
97	490	420	490	370
98	410	350	290	340
99	320	290	240	270
100	340	320	390	380
101	490	390	370	460
102	540	300	220	390
103	670	350	360	420
104	580	450	300	470

EMPIRE COTTON GROWING CORPORATION.

Yield in Gms. Uniformity Trial 1935-36. Field B 5 b. (continued).

Row No.	Series A.	Series B.	Series C.	Series D.
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105	560	430	370	450
106	690	470	290	430
107	660	430	410	300
108	910	410	470	320
109	740	480	370	420
110	630	430	360	500
111	710	490	410	540
112	590	420	440	410
113	570	190	300	580
114	490	340	270	530
115	620	440	220	430
116	430	400	260	370
117	450	430	280	300
118	390	410	250	350
119	350	540	220	410
120	200	370	260	270
121	310	400	350	420
122	160	380	260	410
123	270	320	390	460
124	310	490	650	490
125	460	460	500	450
126	410	540	480	500
127	380	420	650	540
128	390	510	640	570
129	440	600	750	670
130	450	480	630	590
131	440	520	620	510
132	620	350	440	370
133	620	400	520	480
134	540	570	390	370
135	750	590	400	380
136	690	650	420	560
137	450	560	540	500
138	640	550	550	380

EMPIRE COTTON GROWING CORPORATION.

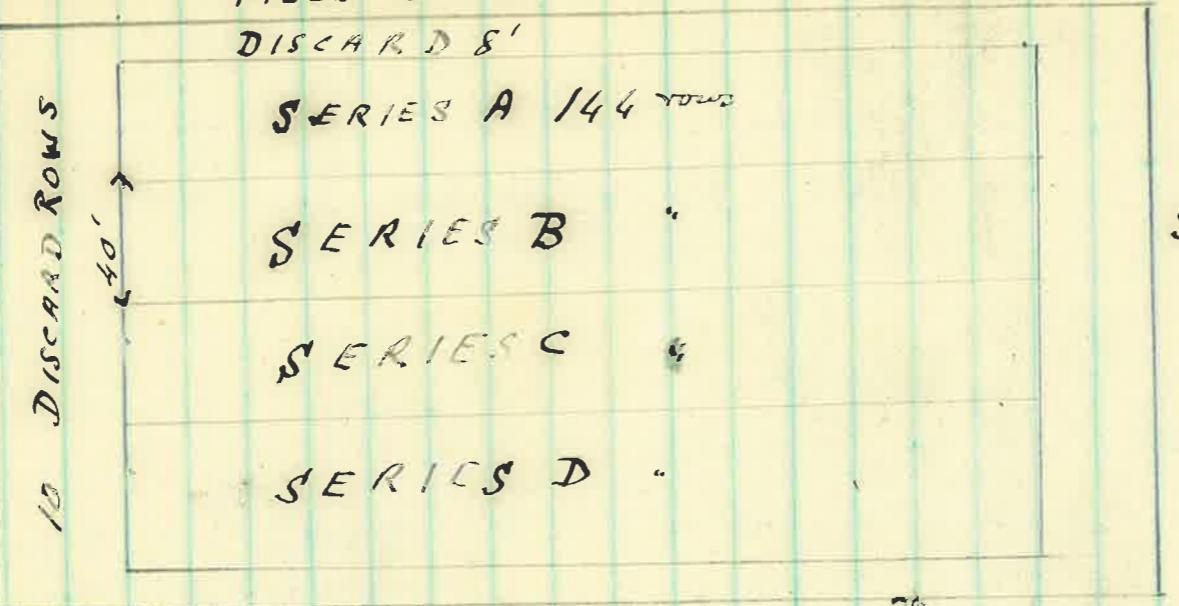
Uniformity Trial 1935-36. Field B 5 b. (continued).

<u>Yield In Gms.</u>	Series A.	Series B.	Series C.	Series D.
Row No.				
139	710	640	430	380
140	660	490	580	380
141	630	600	490	360
142	650	600	450	390
143	690	610	580	610
144	540	580	530	560



FIELD B 2 a E

DISCARD 8'



FIELD B 5 b was checked up into
30' units in the same way as above
field B 2 a.

D. MacDonald

SS	15	184, 291	12, 286	$SE = 110.8 = 41.3\%$
"cols"	3	<u>112, 053</u>		
Res.	12	<u>42, 238</u>	6, 020	$SE = 94.6 = 28.9$
"Rows"	3	<u>29, 948</u>		
Res	9	<u>42, 290</u>	4, 698	$SE = 68.5 = 25.5\%$

Plots of 2 rows x 160'

15	54, 208	3, 814	$SE 61.96$	14.5%
3	<u>43, 358</u>			
12	<u>13, 850</u>	1, 154	33.94	$= 9.69\%$

Plots of 8 rows x 40'

15	<u>343, 042</u>
3	<u>43, 358</u>
12	<u>329, 684</u>
3	<u>264, 142</u>
9	<u>52, 542</u>

2x4 best of the $\frac{1}{3}q$ plots