

30

**EMPIRE COTTON GROWING CORPORATION.**

INCORPORATED BY ROYAL CHARTER.

OFFICES:

KING'S BUILDINGS,  
DEAN STANLEY STREET,  
MILBANK, 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. Mc Donald*



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		390 317
3	470		380	185	500 250		390
624 4	310 188		340		530		410 201 333
5	280		360		580		520
6	220		590		700		440 369
7	240		400		640		640
1046 8	160 136 250		530 254 337		650 312 449		690 378 344 395
9	270		550		650		810 1444
10	470		470		480		860 456
11	360		310		400		1020
12	230		360		490		890 406
1118 13	460 179		380 177		580 330		650
14	430		420		830		900 424 465
15	310		300		1000		780
16	330 286		340 313		940 537		980 689 498
17	350		600		690		1090 1825
1309 18	310 155		320 216		1030		850 524
19	310		480		930 459		920 479
20	250		420		1000		950 526
4289 21	210 658		590 832		800 1351		720 1448
22	240		480		720		750 451
23	350		510		680		770
24	250 227		600 400		590 644		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	380 261		550 493		970 582		640 537 452
33	310		550		910		630 1873
	1024		1543		2212		2285 7664

## Yield in Gms.

## Uniformity Trial 1935-36. B2A Cont.

Row. No.	Series A.	Series B.	Series C.	Series D	
34	300	440	780	550	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

Yield in Gms.

Uniformity Trial 1935-36 B.2.A Cont.

Row No.	Series A.	Series B	Series C	Series D	
67	530	670	470	320	
68	490	600	480	530	409
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.

Yield in GmsUniformity Trial 1935-36 B.2.A.cont

Row.No	Series A.	Series B.	Series.C	Series D.	
100	750	560	550	500	461
101	740	680	480	600	
102	680	430	480	600	469
103	520	500	500	600	
104	550 531	430 428	580 424	650 469	433
105	530	570	600	590	
106	550	420	410	450	412
107	670	500	440	460	
108	510	430	460	440	391
109	290	340	330	570	
110	410	460	420	520	334
111	580	650	390	550	
112	510 405	580 395	460 351	510 409	423
113	540	720	690	690	
114	600	710	600	660	521
115	640	560	510	580	
116	670	440	620	630	465
117	490	570	580	570	
118	510	670	930	530	485
119	620	660	710	760	
120	450 452	610 494	520 516	330 475	466
121	710	730	690	420	
122	650	580	610	460	485
123	640	740	430	550	
124	700	770	510	460	480
125	520	920	560	450	
126	600	740	600	570	496
127	610	690	660	460	
128	680 511	940 611	560 462	500 387	510
129	660	850	410	390	
130	850	690	480	400	473
131	610	730	430	350	
132	810	590	430	350	430

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



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

730

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

34 360

380

600

460



## EMPIRE COTTON GROWING CORPORATION

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

Yield in Gms.

Series A.	Series B.	Series C.	Series D.
Row No.			
35 470	490	580	410
36 500	380	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.

Yield In Gms.

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

Row No.	Series A.	Series B.	Series C.	Series D.
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

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

Series A.		Series B.	Series C.	Series D.
Row No.				
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	340	220	410
120	200	370	260	270
121	310	400	350	420
122	160	380	280	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	360
137	450	560	540	300
138	640	550	550	380



EMPIRE COTTON GROWING CORPORATION.

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

Yield in Gms.

	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	380	610
144	540	580	530	560



FIELD B2a. E

DISCARD 8'

SERIES A 144 rows

SERIES B "

SERIES C "

SERIES D "

10 DISCARD ROWS

40'

S

N

FIELD B56 was divided up into  
30' units in the same way as above  
field B2a.

D. MacDonell





SS	15	184,291	12,286	SE = 110.8 = 41.3%
"cols."	3	112,053		
Res.	12	<u>42,238</u>	6,010	SE = 74.6 = 28.9%
"rows."	3	29,948		
Res.	9	<u>42,290</u>	4,698	SE = 68.5 = 25.5%

Plots of 2 rows x 150'

15	54,208	3,814	SE 61.76	14.5%
3	<u>43,358</u>			
12	13,850	1,154	33.97 =	7.69%

Plots of 8 rows x 40'

15	343,042
3	<u>43,358</u>
12	329,684
3	<u>267,142</u>
9	<u>52,542</u>

2x4 best of the  $\frac{1}{39}$  plots