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Yields of the Field Experiments 1967

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67/R/RP11/1/DD/10 Potatoes - Varieties N and Scab

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67/Da/11.1

POTATOES

(RP 12a/1 and RP 12b/21)

Transmission of scab (*Streptomyces scabies*) - Fosters O & E VI and Highfield O & E III, 1967.

Design (each field): 4 blocks of 5 plots, split into 2.

Area of each sub plot: 0.0014. Area harvested: 0.0013.

Treatments: All combinations of:-

- Whole plots: 1. Seed tuber infection (*Streptomyces scabies*): Severe (SV), moderate (MD), slight (SL), clean (CL), clean seed formalin dipped (FD).
Sub plots: 2. Chitting: None (O), seed chitted (C).

Basal applications: 10 cwt (13:13:20). Weedkiller: Linuron at 0.75 lb plus paraquat at 0.5 lb ion in 37 gals. Fungicide: Mancozeb at 1.2 lb in 30 gals on three occasions.

Cultivations, etc.: Ploughed: Sept 12, 1966. Basal NPK compound applied: Apr 5, 1967. Plots rotary cultivated, potatoes machine-planted: Apr 26. Weedkiller applied: May 17. Fungicide applied: June 30, July 21, Aug 3. Sprayed with undiluted BOV at 15 gals: Aug 23. Lifted: Sept 22. Variety: Majestic. Previous crops: Fosters - Clover 1965 and 1966, Highfield: Potatoes 1965, barley 1966.

NOTE: Samples were taken during June and July for estimates of the incidence of scab and for the degree of tuberisation.

Standard errors per plot. Total tubers:

- Fosters O & E VI. Whole plot: 0.931 or 6.0% (12 d.f.)
Sub plot: 0.966 or 6.3% (15 d.f.)
Highfield O & E III. Whole plot: 1.125 or 7.0% (12 d.f.)
Sub plot: 1.639 or 10.1% (15 d.f.)

67/Da/11.2

SUMMARY OF RESULTS

TOTAL TUBERS

	SV	MD	SL	CL	FD	Mean
FOSTERS O & E VI						
	(1) and (2)					(± 0.216)
O	14.42	16.59	15.00	16.17	15.67	15.57
C	13.92	17.17	15.25	15.25	14.58	15.23
Mean (± 0.465)	14.17	16.88	15.13	15.71	15.13	15.40

HIGHFIELD O & E III

	(1) and (2)					(± 0.366)
O	14.42	14.92	14.67	16.67	16.08	15.35
C	16.50	18.59	17.75	15.08	17.17	17.02
Mean (± 0.563)	15.46	16.75	16.21	15.88	16.63	16.18

Foster O + E VI (1) (± 0.577) For use in horizontal and diagonal comparisons
 (2) (± 0.483) For use in vertical and interaction comparisons

Highfield O & E III (1) (± 0.808) For use in horizontal and diagonal comparisons
 (2) (± 0.819) For use in vertical and interaction comparisons

67/De/1.1

SUGAR BEET

Effect of soil compaction on growth of sugar beet, Saxmundham Grove Plot, 1967, the first year.

Design: 4 randomised blocks of 3 plots, split into 4.

Area of each sub-plot: 0.0145. Area harvested: 0.0015.

Treatments: All combinations of:-

- Plots 1. Soil preparation: Soil worked down in winter and allowed to compact (A), soil worked down in spring and compressed (B), soil kept as open as possible when working seedbed (C).
- Sub-plots 2. Fertilisers: 0.6 cwt (N1), 1.2 cwt (N2), 1.8 cwt (N3) 1.2 cwt N plus, 1.6 cwt P2O5 applied as triple superphosphate, half in winter, half in spring (N2P). All N applied in seedbed as 'Nitro-Chalk'.

Basal applications: 0.8 cwt P2O5, 1.0 cwt K2O as triple superphosphate and muriate of potash. Insecticide: Demeton-s-methyl at 3 oz in 37 gals on 2 occasions.

Cultivations, etc.: Ploughed: Nov 29 - Dec 16, 1966. A plots rotary cultivated twice, half phosphate dressing applied to NP sub-plots: Feb 15, 1967. B and C plots worked 3 times with a heavy spring-tine cultivator: Mar 29. All plots harrowed four times with light drag-harrows (twice in each direction), basal PK, 'Nitro-Chalk' and second half phosphate dressing (NP sub-plots) applied, seed drilled at 7 lb. B plots compressed by rolling four times with Cambridge roller: Mar 30. Singled: May 17. Insecticide applied: June 12 and July 7. Lifted: Oct 4. Variety: Sharp's Klein E. Previous crops: Barley 1965 and 1966.

Standard errors per plot.

Roots (washed):	Whole plot:	1.083 or 7.0% (6 d.f.)
	Sub-plot:	2.053 or 13.3% (27 d.f.)
Total sugar:	Whole plot:	4.02 or 7.7% (6 d.f.)
	Sub-plot:	7.37 or 14.1% (27 d.f.)

67/De/1.2

SUMMARY OF RESULTS

	N1	N2	N3	N2P	Mean
ROOTS (WASHED)					
(1) and (2)					
					(±0.541)
A	10.66	14.98	17.18	15.20	14.50
B	13.86	14.76	17.79	14.87	15.32
C	13.79	17.03	16.03	19.27	16.53
Mean (±0.593)	12.77	15.59	17.00	16.45	15.45
SUGAR %					
A	16.9	17.1	16.7	17.3	17.0
B	17.0	16.7	16.4	16.8	16.7
C	17.3	17.2	16.7	16.5	16.9
Mean	17.1	17.0	16.6	16.9	16.9

(1) (±1.041) For use in vertical and diagonal comparisons

(2) (±1.027) For use in horizontal and interaction comparisons

	57/De/1.3				
	N1	N2	N3	N2P	Mean
	TOTAL SUGAR				
	(1) and (2)				(± 2.01)
A	36.1	51.4	57.5	52.9	49.5
B	47.2	49.4	58.3	50.0	51.2
C	47.8	58.6	53.4	63.6	55.8
Mean (± 2.13)	43.7	53.1	56.4	55.5	52.2

	PLANT NUMBER				
A	22.3	25.0	24.8	26.6	24.7
B	27.4	27.9	25.5	24.2	26.3
C	26.9	29.8	26.5	31.3	28.6
Mean	25.5	27.6	25.6	27.4	26.5

- (1) (± 3.77) For use in vertical and diagonal comparisons
 (2) (± 3.69) For use in horizontal and interaction comparisons