

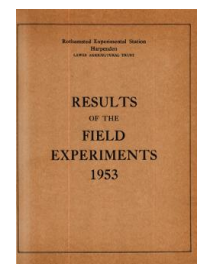
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Yields of the Field Experiments 1953

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Miscellaneous Data

Rothamsted Research

Rothamsted Research (1954) *Miscellaneous Data* ; Yields Of The Field Experiments 1953, pp 105 - 109 - DOI: <https://doi.org/10.23637/ERADOC-1-173>

53/Ch/2.1

CARROTS

Soil conditioners - Rothamsted, Long Hoos VI and Stackyard; Woburn, Stackyard and Warren Field.

System of replication: 4 x 4 Latin square.

Area of each plot: 0.00207 acre. Area harvested: 0.00138 acre.

Treatments:

None and 3 proprietary soil conditioners A, B and C each at 10 cwt per acre active material, rotary cultivated in to 6".

Basal dressing: 5 cwt compound fertilizer (7% N; 7% P₂O₅; 10.5% K₂O) per acre.

Cultivations, etc.:

Long Hoos VI (R). Ploughed: Jan 22. Roto tilled, soil conditioners and basal dressing applied, rotor tilled: Mar 20. Seed drilled: Apr 20. Lifted: Sept 25 and Oct 28. Previous crop: Sugar beet.

Stackyard (R). Ploughed: Oct 20, 1952 and again Mar 9, 1953. Roto tilled, soil conditioners and basal dressing applied, roto tilled: Mar 21. Seed drilled: Apr 20. Lifted: Oct 19 and 24. Previous crop: Wheat.

Stackyard (W). Hand dug: Jan 23. Soil conditioners applied: Mar 25 and Apr 23. Seed drilled: May 5. Basal dressing applied: May 15. Singled: July 2. Lifted: Oct 12. Previous crop: Fallow.

Warren Field (W). Hand dug: Jan 27. Soil conditioners applied: Mar 25 and Apr 23. Seed sown: May 6. Basal dressing applied: May 15. Singled: June 23. Lifted: Aug 27-Sept 22. Previous crop: Barley.

All fields, Variety: James' Scarlet Intermediate.

Standard errors per plot: Roots: tons per acre

Long Hoos VI (R):	1.21 tons per acre or 4.3% (6 d.f.)
Stackyard (R):	1.51 tons per acre or 6.5% (6 d.f.)
Stackyard (W):	1.24 tons per acre or 13.3% (3 d.f.) [‡]
Warren Field (W):	0.82 tons per acre or 6.4% (6 d.f.)

[‡]1 row of the Latin square received incorrect treatments.

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Summary of Results

	Soil conditioners 10 cent per acre active material				
	None	A	B	C	Mean
Roots: tons per acre					
<u>Rothamsted, Long Hoos VI</u>					
Mean (± 0.606)	28.26	28.91	27.13	29.08	28.35
Increase (± 0.858)		+0.65	-1.13	+0.82	
<u>Rothamsted, Stackyard</u>					
Mean (± 0.756)	23.80	24.93	21.65	23.06	23.36
Increase (± 1.069)		+1.13	-2.15	-0.74	
<u>Woburn, Stackyard</u>					
Mean (± 0.761)	8.74	9.66	9.38	9.62	9.35
Increase (± 1.077)		+0.92	+0.64	+0.88	
<u>Woburn, Warren Field</u>					
Mean (± 0.410)	11.75	12.30	13.75	13.35	12.79
Increase (± 0.579)		+0.55	+2.00	+1.60	

General means:	Plant no. thousands per acre	Percentage over $1\frac{1}{2}$ " diameter
Woburn, Stackyard	167	50.9
Woburn, Warren Field	174	56.6

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CHEMICAL ANALYSES OF MANURES USED IN THE THREE, FOUR AND SIX COURSE
ROTATION EXPERIMENTS 1953

Manures	% Organic Matter	% N	% P ₂ O ₅	% K ₂ O
Three Course Rotation				
Wheat Straw	78.7	0.29	0.11	0.87
Sulphate of Ammonia		21.0		
Superphosphate			19.4 (total)	
Muriate of Potash				58.4
Four Course Rotation				
Wheat Straw	83.0	0.37	0.08	0.23
Adco Compost	16.6	0.40	0.24	0.30
Dung	12.2	0.52	0.20	0.26
Sulphate of Ammonia		21.0		
Superphosphate			18.4 (total)	
Mineral Phosphate			27.9	
Muriate of Potash				58.4
Six Course Rotation				
Sulphate of Ammonia		21.0		
Superphosphate			Autumn 18.4 (total) Spring 19.4 (total)	
Muriate of Potash				58.4

METEOROLOGICAL RECORDS ROTHAMSTED 1953
(Departure from long period means in brackets)

Month	Total Hours of Sunshine	Mean Temperature (°F.)			Ground (2) Frosts	Total Rainfall (in) 1/1000 acre Gauge	Rain (3) Days	Drain- age through 20 in soil	Wind (4) m. p. h.
		Air (1)	1 ft	4 ft					
Jan.	40 (-13)	36.8 (-0.6)	34.3	36.4	17	1.21 (-1.32)	14	0.96	4.1
Feb.	64 (-5)	37.5 (-0.9)	33.6	37.2	16	2.47 (+0.56)	11	1.60	6.1
Mar.	132 (+15)	41.5 (+0.2)	34.5	40.1	19	0.55 (-1.37)	8	0.00	4.7
Apr.	159 (+3)	45.5 (-0.3)	38.1	44.7	5	2.63 (+0.67)	13	0.60	6.1
May	209 (+13)	53.9 (+2.0)	46.6	53.6	2	1.73 (-0.42)	11	0.50	5.4
June	125 (-81)	56.5 (-0.8)	50.6	57.1	0	2.30 (+0.15)	14	0.54	4.4
July	178 (-17)	59.3 (-1.4)	53.5	60.4	0	3.96 (+1.42)	19	1.28	4.4
Aug.	205 (+19)	61.2 (+1.0)	53.5	61.5	0	1.66 (-0.93)	8	0.14	3.7
Sept.	157 (+11)	56.4 (+0.4)	51.1	57.2	0	2.12 (-0.27)	14	0.68	3.8
Oct.	69 (-35)	49.4 (+0.5)	46.6	51.5	3	3.03 (+0.04)	15	1.83	2.9
Nov.	50 (-13)	45.5 (+3.1)	42.8	45.8	4	1.90 (-0.92)	17	1.75	3.9
Dec.	30 (-15)	43.5 (+4.8)	41.7	44.9	5	0.71 (-1.87)	20	0.27	4.3
Year*	1418 (-118)	48.9 (+0.7)	43.9	49.2	71	24.27 (-4.27)	164	10.15	4.5

(1) Mean of maximum and minimum

(2) Number of nights grass minimum was 30°F or less.

(3) Number of days rainfall was 0.01 in. or more.

(4) At 2 metres above ground level.

* Mean or total.

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METEOROLOGICAL RECORDS WOBURN 1953

Month	Total hours of Sunshine	Mean Temperature (°F)		Grass Minimum: °F	Total Rainfall: (in.) 8" gauge	Rain (2) days
		Air (1)	In Ground 1 ft.			
January	33	37.1	36.9	29.5	1.16	13
February	68	38.2	37.8	29.2	1.62	11
March	126	41.2	41.0	26.7	0.62	7
April	156	45.3	46.0	32.0	2.34	13
May	204	54.3	55.6	39.9	1.64	11
June	110	56.5	58.9	46.1	1.92	15
July	190	60.0	61.9	48.0	2.97	20
August	223	61.1	62.5	47.4	3.11	11
September	170	56.6	57.8	42.7	1.41	11
October	68	49.0	51.1	37.4	2.13	15
November	55	46.4	46.1	37.3	1.31	10
December	32	43.9	45.0	36.4	0.58	13
Year [⊠]	1437	49.1	50.0	37.7	20.81	150

(1) Mean of maximum and minimum

(2) Number of days rainfall was 0.01 in. or more.

⊠ Mean or total