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## Yields of the Field Experiments 1964

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### 64/W/WMG/B/5 Market Garden Soil

#### Rothamsted Research

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64/B/5.1

WOBURN MARKET GARDEN EXPERIMENT

(WMG)

Organic manures, N, P and K - Lansome Field 1964, the 23rd year of the experiment, the fourth year with revised treatments.

Carrots: The nitrogen is now applied at none, 0.45, 0.9 cwt N. All fertilisers are applied in the seedbed.

Globe beet: The seed dressing test is discontinued, all seed now being dressed with BHC/organo-mercury dressing. All fertilisers are now applied in the seedbed.

Area of each sub plot: 0.0063. Area harvested: Leeks - 0.0022, carrots - 0.0017, globe beet - 0.0017.

NOTE: The 1964 - 65 leeks grew poorly and were lifted without weighing to clear the ground early in preparation for microplots 1965.

Cultivations, etc.:

Leeks 1963 - 64. Dung and NPK applied: Aug 7, 1963. Second half of NPK applied, leeks planted: Aug 8. Harvested: 1st lifting - Feb 24, 2nd lifting - Mar 23, 1964.

Carrots. Dung applied, plots ploughed: Jan 9, 1964. Fertilisers applied: Apr 2. Seed drilled at 5.5 lb: Apr 3. Sprayed with menazon at 0.7 pints in 60 gals: May 27. Lifted - 1st harvest: July 14, 2nd harvest: Aug 5.

Globe beet. Ground chalk applied at 23 cwt, dung applied, plots ploughed: Apr 15, 1964. Fertilisers applied: Apr 27. Seed drilled at 11 lb: May 4. Sprayed with DDT (Arkotone DDT at 3 pints in 40 gals): May 21. Singled: June 16 - 30. Lifted - 1st harvest: July 22, 2nd harvest: Aug 10.

NOTE: The eight plots on the western side of the experiment were affected by faulty drilling and yields were estimated from reduced areas.

64/B/5.2

Standard errors per plot.

Carrots: Graded Produce: 1st harvest: 1.307 or 15.0% (11 d.f.)  
2nd harvest: 1.909 or 9.9% (11 d.f.)  
Mean of 2 harvests: 1.232 or 8.8% (11 d.f.)  
Tops: 1st harvest: 1.708 or 17.9% (11 d.f.)  
2nd harvest: 1.382 or 12.0% (11 d.f.)  
Mean of 2 harvests: 1.177 or 11.2% (11 d.f.)  
Globe Beet: Total Produce: 1st lifting: 1.036 or 9.6% (11 d.f.)  
2nd lifting: 2.794 or 19.3% (11 d.f.)  
Mean of 2 liftings: 1.794 or 14.2% (11 d.f.)  
Total Saleable Roots: 1st lifting: 0.671 or 13.4% (11 d.f.)  
2nd lifting: 2.103 or 22.1% (11 d.f.)  
Mean of 2 liftings: 1.280 or 17.6% (11 d.f.)

64/B/5.3

SUMMARY OF RESULTS

LEEKS 1963 - 1964. 1ST LIFTING. SALEABLE PRODUCE

Dung	Organic manure applied 1942-61	Mean	Fertiliser	
			None	N1P1K1
10	D1	2.71	2.84	2.58
20	D2	2.64	2.96	2.31
10	C1	2.72	2.56	2.88
20	C2	2.66	3.22	2.11
	D1+C1	2.72	2.70	2.74
	D2+C2	2.65	3.09	2.21
Mean		2.68	2.90	2.47

NPK	
111	2.21
111*	1.91
211	2.01
211*	2.26
112	2.56
112*	2.51
212	0.95
212*	2.56
Mean	2.12

\* NPK half ploughed in, half in seedbed.



64/B/5.4

LEEKs 1963 - 1964. 2ND LIFTING. SALEABLE PRODUCE

Dung	Organic manure applied 1942-61	Mean	Fertiliser	
			None	N1P1K1
10	D1	3.32	3.62	3.02
20	D2	3.60	4.00	3.22
10	C1	3.56	3.30	3.82
20	C2	2.95	3.30	2.61
	D1+C1	3.44	3.46	3.42
	D2+C2	3.28	3.64	2.91
Mean		3.36	3.55	3.16

NPK

111	2.61
111*	3.12
211	2.76
211*	2.91
112	2.51
112*	3.12
212	2.11
212*	2.96
Mean	2.76

\* NPK half ploughed in, half in seedbed.

64/B/5.5

LEEKS 1963 - 1964. MEAN OF 2 LIFTINGS. SALEABLE PRODUCE

Dung	Organic manure applied 1942-1961	Mean	Fertiliser	
			None	N1P1K1
10	D1	3.01	3.23	2.80
20	D2	3.12	3.48	2.76
10	C1	3.14	2.93	3.35
20	C2	2.81	3.26	2.36
	D1+C1	3.08	3.08	3.08
	D2+C2	2.96	3.37	2.56
Mean		3.02	3.22	2.82

NPK	
111	2.41
111*	2.52
211	2.38
211*	2.58
112	2.54
112*	2.82
212	1.53
212*	2.76
Mean	2.44

\* NPK half ploughed in, half in seedbed.

64/B/5.6

CARROTS. GRADED PRODUCE. ROOTS

Dung	Organic manure applied 1942-62*	Mean	Fertiliser	
			None	N1P1K1
1ST HARVEST				
		(±0.654)		(±0.924)
10	D1	8.98	9.85	8.11
20	D2	8.98	7.60	10.36
10	C1	8.15	8.20	8.10
20	C2	9.24	8.25	10.23
		(±0.462)		(±0.654)
	D1+C1	8.56	9.02	8.10
	D2+C2	9.11	7.92	10.30
Mean		8.84	8.48	9.20
			(±0.462)	

NPK	
111	8.99
211	8.35
112	8.53
212	7.80
Mean	8.42

\* Last applied to early potatoes in 1962.

64/B/5.7

CARROTS. GRADED PRODUCE. ROOTS

Dung	Organic manure applied 1942-62*	Mean	Fertiliser	
			None	N1P1K1
2ND HARVEST				
		(±0.954)		(±1.350)
10	D1	18.16	18.75	17.56
20	D2	20.39	20.31	20.47
10	C1	19.60	19.81	19.40
20	C2	20.14	18.69	21.60
		(±0.675)		(±0.954)
	D1+C1	18.88	19.28	18.48
	D2+C2	20.27	19.50	21.04
Mean		19.57	19.39	19.76
			(±0.675)	

NPK

111	16.45
211	18.35
112	21.35
212	17.65
Mean	18.45

\* Last applied to early potatoes in 1962.



64/B/5.8

CARROTS. GRADED PRODUCE. ROOTS

Dung	Organic manure applied 1942-62*	Mean	Fertiliser	
			None	N1P1K1
MEAN OF 2 HARVESTS				
		(±0.616)		(±0.871)
10	D1	13.56	14.30	12.83
20	D2	14.69	13.96	15.42
10	C1	13.88	14.01	13.75
20	C2	14.69	13.47	15.91
		(±0.436)		(±0.616)
	D1+C1	13.72	14.16	13.29
	D2+C2	14.69	13.72	15.66
Mean		14.20	13.94	14.48
			(±0.436)	

NPK	
111	12.72
211	13.35
112	14.94
212	12.72
Mean	13.43

\* Last applied to early potatoes in 1962.

64/B/5.9

CARROTS. TOPS

Dung	Organic manure applied 1942-62*	Mean	Fertiliser	
			None	N1P1K1
1ST HARVEST				
		(±0.854)	(±1.208)	
10	D1	8.82	9.85	7.78
20	D2	12.04	9.29	14.80
10	C1	9.07	7.18	10.96
20	C2	11.46	9.08	13.84
		(±0.604)	(±0.854)	
	D1+C1	8.94	8.52	9.37
	D2+C2	11.75	9.18	14.32
Mean		10.35	8.85	11.84
			(±0.604)	

NPK	
111	7.02
211	8.00
112	6.46
212	10.00
Mean	7.87

\* Last applied to early potatoes in 1962.

64/B/5.10

CARROTS. TOPS

Dung	Organic manure applied 1942-62*	Mean	Fertiliser	
			None	N1P1K1
2ND HARVEST				
		(±0.691)	(±0.977)	
10	D1	10.92	11.23	10.61
20	D2	14.88	13.55	16.22
10	C1	11.21	9.91	12.51
20	C2	13.45	12.06	14.84
		(±0.489)	(±0.691)	
	D1+C1	11.06	10.57	11.56
	D2+C2	14.16	12.80	15.53
Mean		12.62	11.69	13.54
			(±0.489)	

NPK

111	8.23
211	8.52
112	9.15
212	11.36
Mean	9.32

\* Last applied to early potatoes in 1962.

64/B/5.11

CARROTS. TOPS

Dung	Organic manure applied 1942-62*	Mean	Fertiliser	
			None	N1P1K1
MEAN OF 2 HARVESTS				
		(±0.588)		(±0.832)
10	D1	9.87	10.54	9.20
20	D2	13.46	11.42	15.51
10	C1	10.14	8.54	11.73
20	C2	12.46	10.57	14.34
		(±0.416)		(±0.588)
	D1+C1	10.00	9.54	10.46
	D2+C2	12.96	11.00	14.92
Mean		11.48	10.27	12.70
			(±0.416)	

NPK

111	7.62
211	8.26
112	7.80
212	10.68
Mean	8.59

\* Last applied to early potatoes in 1962.



64/B/5.12

GLOBE BEET. SALEABLE BULBS

Dung	Organic manure applied 1942-61*	Fertiliser		
		Mean	None	N1P1K1
1ST HARVEST				
		(±0.336)		(±0.474)
10	D1	4.20	1.62	6.78
20	D2	6.23	5.72	6.75
10	C1	4.83	2.88	6.78
20	C2	6.69	6.65	6.72
		(±0.237)		(±0.336)
	D1+C1	4.52	2.24	6.78
	D2+C2	6.46	6.18	6.74
Mean		5.49	4.22	6.76
			(±0.237)	

NPK

111	4.07
211	4.17
112	4.07
212	4.07
Mean	4.10

\* Last applied to Leeks 1961/62.

64/B/5.13

GLOBE BEET. SALEABLE BULBS

Dung	Organic manure applied 1942-61*	Mean	Fertiliser	
			None	N1P1K1
2ND HARVEST				
		(±1.052)		(±1.487)
10	D1	8.58	5.23	11.92
20	D2	11.69	11.21	12.18
10	C1	9.06	6.46	11.66
20	C2	11.92	9.79	14.05
	D1+C1	(±0.744) 8.82	5.85	(±1.052) 11.79
	D2+C2	11.81	10.50	13.12
Mean		10.31	8.17	(±0.744) 12.45

NPK	
111	8.88
211	8.79
112	6.23
212.	7.56
Mean	7.86

\*Last applied to Leeks 1961/62.

64/B/5.14

GLOBE BEET. SALEABLE BULBS

Dung	Organic manure applied 1942-61*	Mean	Fertiliser	
			None	N1P1K1
MEAN OF 2 HARVESTS				
		(±0.640)		(±0.905)
10	D1	6.39	3.42	9.35
20	D2	8.96	8.46	9.46
10	C1	6.95	4.67	9.22
20	C2	9.30	8.22	10.38
		(±0.453)		(±0.640)
	D1+C1	6.67	4.05	9.29
	D2+C2	9.13	8.34	9.92
Mean		7.90	6.19	9.60
			(±0.453)	

NPK

111	6.48
211	6.48
112	5.15
212	5.82
Mean	5.98

\* Last applied to Leeks 1961/62.

64/B/5.15

GLOBE BEET. TOTAL PRODUCE

Dung	Organic manure applied 1942-61*	Mean	Fertiliser	
			None	N1P1K1
1ST HARVEST				
		(±0.518)		(±0.733)
10	D1	9.22	5.10	13.34
20	D2	13.00	12.08	13.92
10	C1	10.45	7.14	13.76
20	C2	13.65	13.66	13.63
		(±0.366)		(±0.518)
	D1+C1	9.84	6.12	13.55
	D2+C2	13.32	12.87	13.78
Mean		11.58	9.50	13.66
				(±0.366)

NPK	
111	8.72
211	9.21
112	9.63
212	9.27
Mean	9.21

\*Last applied to Leeks 1961/62.



64/B/5.16

GLOBE BEET. TOTAL PRODUCE

Dung	Organic manure applied 1942-61*	Fertiliser		
		Mean	None	N1P1K1
2ND HARVEST				
		(±1.397)	(±1.976)	
10	D1	12.99	9.08	16.89
20	D2	17.67	17.18	18.15
10	C1	13.99	10.85	17.12
20	C2	17.78	14.89	20.67
		(±0.988)	(±1.397)	
	D1+C1	13.49	9.96	17.01
	D2+C2	17.72	16.04	19.42
Mean		15.61	13.00 (±0.988)	18.21

NPK	
111	13.24
211	13.41
112	10.82
212	11.86
Mean	12.33

\* Last applied to Leeks 1961/62.

64/B/5.17

GLOBE BEET. TOTAL PRODUCE

Dung	Organic manure applied 1942-61*	Mean	Fertiliser	
			None	N1P1K1
MEAN OF 2 HARVESTS				
		(±0.897)		(±1.269)
10	D1	11.10	7.09	15.12
20	D2	15.34	14.63	16.04
10	C1	12.22	9.00	15.44
20	C2	15.72	14.28	17.15
		(±0.634)		(±0.897)
	D1+C1	11.66	8.04	15.28
	D2+C2	15.53	14.46	16.60
Mean		13.60	11.25	15.94
			(±0.634)	

NPK

111	10.98
211	11.31
112	10.22
212	10.56
Mean	10.77

\* Last applied to Leeks 1961/62.

64/B/5.18

GLOBE BEET. PLANT NUMBER

Dung	Organic manure applied 1942-61*	Mean	Fertiliser	
			None	N1P1K1
1ST HARVEST				
10	D1	123.6	110.3	136.9
20	D2	154.8	159.2	150.5
10	C1	132.6	140.1	125.0
20	C2	143.1	143.8	142.4
	D1+C1	128.1	125.2	131.0
	D2+C2	149.0	151.5	146.4
Mean		138.5	138.4	138.7

NPK	
111	118.4
211	120.1
112	173.4
212	123.3
Mean	133.8

\* Last applied to Leeks 1961/62.

64/B/5.19

GLOBE BEET. PLANT NUMBER

Dung	Organic manure applied 1942-61*	Mean	Fertiliser	
			None	N1P1K1
2ND HARVEST				
10	D1	139.5	142.1	136.9
20	D2	166.6	177.4	155.7
10	C1	159.0	172.2	145.9
20	C2	149.6	149.6	149.6
	D1+C1	149.3	157.2	141.4
	D2+C2	158.1	163.5	152.6
Mean		153.7	160.3	147.0

NPK	
111	130.0
211	124.7
112	178.0
212	147.0
Mean	144.9

\* Last applied to Leeks 1961/62.



64/B/5.20

GLOBE BEET. PLANT NUMBER

Dung	Organic manure applied 1942-61*	Mean	Fertiliser	
			None	N1P1K1
MEAN OF 2 HARVESTS				
10	D1	131.6	126.2	136.9
20	D2	160.7	168.3	153.1
10	C1	145.8	156.2	135.5
20	C2	146.4	146.7	146.0
	D1+C1	138.7	141.2	136.2
	D2+C2	153.6	157.5	149.6
Mean		146.1	149.4	142.9

NPK	
111	124.2
211	122.4
112	175.7
212	135.2
Mean	139.4

\* Last applied to Leeks 1961/62.