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## Yields of the Field Experiments 1957

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### 57/R/A/4 Barnfield - Mangolds and Sugar Beet

#### Rothamsted Research

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57/A/4.1

MANGOLDS AND SUGAR BEET - BARNFIELD

The 82nd and 12th years

For history, treatments etc., see "Details of the Classical and Long Term Experiments" 1956.

A maintenance chalk dressing was applied to Series A, AC and C, at 6 cwt, 9 cwt and 3 cwt per acre respectively, under the new liming scheme introduced in spring 1956.

In July, 4 rows of mangolds and 4 of sugar beet on each plot were thinned, and the remainder removed by thistle bar. Plot 4 N(a) was left with 4 rows of mangolds only.

Cultivations, etc.: Ground chalk applied: Nov 30, 1956. Dung applied: Nov 28 - Dec 1. Ploughed: Dec 1 - 5. Fertilizers applied: May 10 - 14, 1957. Sugar beet drilled at 16 - 20 lb per acre; mangolds drilled at 8 lb per acre: May 17. Sprayed the uncropped west side of plots 1N and 10 only before emergence with 2 gallons Pentachlorophenol (PCP) in 40 gallons of water per acre: May 30. Singled: July 9 - 16. Removed discarded rows by thistle bar: July 10. Top dressings applied to reduced plot areas: July 16 - 18. Lifted: Oct 26 - Nov 7. Varieties: Mangolds - Yellow Globe, sugar beet - Klein E.

Cultivations to discarded areas after July 10:-  
Thistle bar: July 11, July 25, July 29, Sept 17.

57/A/4.2

Summary of Results

Strip	Cross Dressing				
	O	N	A	AC	C
Mangolds, roots: tons per acre					
1	20.35	31.29	31.46	29.41	25.65
2	20.52	30.78	29.07	33.17	28.04
4	7.02	(a) 18.47* (b) 24.45*	22.57	27.70	21.37
5	5.73	19.32	10.77	13.17	13.34
6	6.03	16.41	13.85	23.77	14.02
7	7.54	16.24	21.54	26.33	26.67
8	3.38	13.34	12.65	13.51	13.17
9	21.88				
Mangolds, leaves: tons per acre					
1	5.45	7.84	8.84	9.67	8.45
2	6.03	8.30	7.89	9.53	7.89
4	2.12	(a) 6.62* (b) 7.82*	9.18	11.24	9.11
5	2.00	5.64	6.45	7.52	6.55
6	2.17	4.25	4.69	8.67	5.69
7	1.98	4.93	6.42	8.99	8.11
8	1.47	4.79	5.18	4.91	4.86
9	7.01				
Mangolds, plant number: thousands per acre					
1	16.1	19.3	18.5	17.8	17.0
2	17.0	19.2	18.1	18.8	17.8
4	18.0	(a) 17.4* (b) 18.9*	18.5	15.5	15.5
5	17.0	19.9	19.1	19.3	19.5
6	18.5	16.6	12.8	15.8	13.2
7	19.1	19.9	18.3	18.6	20.2
8	16.1	20.2	18.2	14.0	16.8
9	20.4				

\*No nitrate of soda. Nitrogen applied as calcium and potassium nitrates.

57/A/4.3

Strip	Cross Dressing				
	0	N	A	AC	C
Sugar beet, roots (washed): tons per acre					
1	8.13	11.10	11.39	11.87	12.10
2	7.56	10.64*	11.64	13.73	11.11
4	3.96	(b) 9.35*	10.20	11.42	10.42
5	3.16	8.48	7.27	7.43	7.95
6	3.87	7.28	8.92	10.03	7.79
7	3.40	6.50	9.62	9.49	8.81
8	2.78	6.80	6.72	7.97	6.94
9	7.94				

Sugar beet, tops: tons per acre					
1	7.89	10.89	13.36	13.97	13.80
2	7.77	15.12*	12.80	15.17	13.60
4	3.27	(b) 10.09*	9.38	15.09	13.63
5	2.56	10.06	10.11	12.48	11.55
6	2.42	7.99	9.13	12.87	9.13
7	2.69	8.89	9.70	14.70	11.92
8	2.39	9.45	8.96	13.46	10.01
9	8.23				

Sugar beet, plant number: thousands per acre					
1	18.1	19.0	19.6	20.1	18.8
2	19.2	20.4*	20.8	19.1	18.7
4	24.5	(b) 21.0*	21.7	18.0	18.9
5	23.6	23.0	21.3	19.6	19.8
6	25.1	21.3	21.9	18.2	18.2
7	24.9	22.4	22.3	19.4	20.5
8	22.5	22.7	22.4	20.0	19.7
9	23.1				

Sugar beet, sugar percentage					
1	17.9	16.6	16.7	15.5	16.2
2	17.7	16.0*	16.5	15.7	17.0
4	18.5	(b) 16.8*	17.2	15.3	16.7
5	18.1	16.4	17.1	15.9	15.7
6	18.2	16.8	17.2	16.3	16.4
7	18.9	17.1	17.0	15.0	17.0
8	18.4	16.7	17.2	15.9	16.4
9	17.4				

\*No nitrate of soda. Nitrogen applied as calcium and potassium nitrates.