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Yields of the Field Experiments 1962

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62/R/A/5 Barnfield - Mangolds and Potatoes

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62/A/5.1

MANGOLDS AND POTATOES - BARNFIELD 1962

The following changes were made in 1962 to the treatments and cropping of Barnfield. Several rates of nitrogen as sulphate of ammonia and nitrate of soda were substituted for the single rate and potatoes were grown on half-plots alongside the mangolds.

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

All strips of the experiment are now divided lengthways into two halves, one cropped with mangolds and one with potatoes. The treatments to the series (excluding Series 0) are modified as follows:-

The application of castor meal to Series C and AC is discontinued. Each plot in each series is now divided into 8 sub plots, 4 per crop and a test of none; 0.6; 1.2; 1.8 cwt N per acre is applied, using sulphate of ammonia on Series C, AC and A and nitrate of soda on Series N and Plot 9. The former nitrogen dressings to the series are discontinued.

Series 0 still receives no nitrogen, and the half-plots are not subdivided.

The division of plot 4N introduced in 1903 is discontinued; the plot reverts to the standard strip and series manuring, modified as above.

Area of each sub plot (acres): Strips 2, 5, 6, 7 and 8 - 0.0182
Strips 4 and 9 - 0.0251.
Strip 1 - 0.0137.

Area harvested: Series 0 - 0.0265, remainder - 0.0053.

Note: In 1960 and 1961 no crop was grown, but the manures were applied annually as in the past.

Cultivations, etc.: Dung applied: Nov 20, 1961. Ploughed: Nov 21.

Mineral fertilisers applied to strips: Apr 30, 1962.

Mangolds: N fertilisers applied: May 1, 1962. Seed (rubbed and graded) drilled at 6 lb per acre: May 3. Singled: June 12 - 23. Lifted: Nov 29 - Dec 13. Variety: Prizewinner Yellow Globe.

Potatoes: N fertilisers applied: May 1, 1962. Potatoes machine planted: May 2. Earthed up: July 17. Sprayed with copper oxychloride fungicide at 2.3 lb Cu in 20 gallons per acre: Aug 10. Haulm destroyed with diquat at 3 pints in 40 gallons per acre: Sept 27. Lifted: Oct 17. Variety: Majestic.

Note (1): On Series A, N and 0, plot 9 and certain sub-plots (indicated by asterisks in the tables) of Series AC the mangolds were severely damaged by frost before lifting.

Note (2): Mangolds - plot 6C. There were gaps in the two sub-plots receiving none and 1.8 cwt N. No adjustment has been made to the yields.

Summary of Results

62/A/5.2

Mangolds, Roots weight: tons per acre

Strip	N: cwt per acre	O	N	Series A	AC	C
1	None	24.58	0.91	31.74	35.53 *	34.77
	0.6		36.62	36.87	39.82	38.89
	1.2		44.87	37.80	44.11	45.21
	1.8		43.44	41.00	44.87	45.63
2	None	17.43	25.26	23.23	30.05	29.63
	0.6		29.04	33.93	34.52 *	39.99
	1.2		38.72	35.86	41.00	38.56
	1.8		35.61	38.56	41.00	43.27
4	None	5.29	13.47	18.94	33.76	17.51
	0.6		23.23	25.76	37.29	31.91
	1.2		37.55	30.98	37.71 *	32.66
	1.8		34.77	31.74	41.25 *	39.48
5	None	4.50	9.85	13.81	19.87 *	12.12
	0.6		19.61	14.90	20.71	17.68
	1.2		33.08	15.15	21.21	19.36
	1.8		31.82	14.14	21.13	20.88
6	None	5.47	5.72	17.34	28.96	20.46
	0.6		15.24	30.98	31.06	22.14
	1.2		26.77	32.66	40.32 *	28.12
	1.8		32.24	36.62	33.42	32.41
7	None	5.77	8.00	20.37	31.06	25.26
	0.6		22.65	28.71	34.85 *	32.83
	1.2		35.44	33.51	33.67 *	29.97
	1.8		30.90	29.21	33.51	34.52
8	None	5.32	9.93	6.73	12.88	6.40
	0.6		12.63	13.81	14.65	11.53
	1.2		17.68	8.17	17.76 *	12.96
	1.8		25.17	12.46	15.57 *	11.87
9	None		12.71			
	0.6		22.73			
	1.2		35.27			
	1.8		33.84			

* Severely damaged by frost: also the whole of Series A, N, and Plot 9.

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Mangolds, Leaf weight: tons per acre

Strip	N: cwt per acre	O	N	Series A	AC	O
1	None	4.06	3.96	5.56	4.80*	5.89
	0.6		3.87	4.38	6.23	7.32
	1.2		5.05	5.22	7.49	8.42
	1.8		5.14	5.30	7.91	7.24
2	None	3.35	2.95	2.86	6.06	4.97
	0.6		3.28	4.13	5.56*	7.07
	1.2		4.46	4.88	10.02	7.24
	1.8		3.87	4.80	7.41	8.92
4	None	1.16	2.10	1.68	5.81	2.86
	0.6		3.37	2.53	5.81	4.38
	1.2		4.80	2.95	6.06*	5.81
	1.8		4.80	3.87	5.56*	7.24
5	None	1.04	1.43	2.19	3.54*	2.95
	0.6		2.36	2.69	4.97	4.71
	1.2		3.45	3.96	6.15	5.30
	1.8		4.63	3.62	4.88	5.22
6	None	1.13	1.18	1.60	5.05	4.38
	0.6		1.85	3.54	4.97*	3.79
	1.2		3.37	3.54	5.89*	5.14
	1.8		3.37	3.79	6.06	5.47
7	None	0.96	1.52	2.53	5.72	5.22
	0.6		2.95	2.86	6.57*	6.90
	1.2		3.45	5.14	4.46*	5.39
	1.8		3.96	4.29	5.98	7.74
8	None	1.35	1.60	1.35	3.79	2.95
	0.6		2.27	3.37	4.63	3.70
	1.2		2.86	3.11	4.80*	5.05
	1.8		4.04	3.87	4.63*	5.05
9	None		1.43			
	0.6		3.11			
	1.2		3.70			
	1.8		4.97			

*Severely damaged by frost: also the whole of Series A, N, O and Plot 9.

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Potatoes, Total tubers: tons per acre

Strip	N: cwt per acre	0	N	Series A	AC	C
1	None	7.43	15.92	11.31	14.12	10.04
	0.6		17.58	17.39	15.48	16.42
	1.2		16.28	17.27	17.71	14.96
	1.8		14.48	18.28	17.48	17.86
2	None	9.48	11.85	15.78	11.96	11.50
	0.6		16.27	16.87	15.28	14.08
	1.2		16.97	16.58	15.71	15.78
	1.8		15.19	13.71	14.09	16.53
4	None	4.32	6.55	8.12	8.51	8.56
	0.6		11.20	11.51	12.30	13.96
	1.2		12.87	14.93	13.51	13.26
	1.8		12.66	13.10	13.30	13.36
5	None	3.93	5.35	5.60	7.03	6.78
	0.6		8.38	5.98	8.14	9.39
	1.2		6.52	6.57	8.90	9.13
	1.8		9.34	5.68	7.96	9.64
6	None	3.63	5.67	7.76	9.45	8.29
	0.6		9.31	10.45	14.95	10.75
	1.2		9.08	12.18	14.24	14.73
	1.8		9.16	12.13	14.77	13.44
7	None	4.83	4.65	5.91	6.21	5.67
	0.6		7.09	5.91	7.48	8.06
	1.2		8.65	6.48	8.04	10.51
	1.8		8.00	6.19	9.39	6.86
8	None	3.62	3.69	3.01	6.29	5.89
	0.6		3.03	3.10	6.23	7.77
	1.2		1.78	4.10	6.40	6.55
	1.8		3.93	2.95	6.21	7.11
9	None		3.98			
	0.6		4.00			
	1.2		5.18			
	1.8		4.08			

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Potatoes, Percentage ware ($1\frac{1}{2}$ " riddle)

Strip	N: cwt per acre	O	N	Series A	AC	O
1	None	93.1	96.2	97.0	97.8	96.1
	0.6		95.3	96.5	97.0	95.8
	1.2		98.0	97.1	96.4	96.6
	1.8		95.3	96.2	97.7	96.3
2	None	95.8	97.7	97.2	97.6	97.3
	0.6		95.8	96.0	95.0	96.9
	1.2		94.7	96.2	96.3	94.4
	1.8		95.4	95.5	96.2	95.5
4	None	89.9	94.2	95.3	97.0	94.1
	0.6		97.1	95.8	96.7	95.3
	1.2		96.0	95.7	95.9	95.1
	1.8		95.3	94.2	94.4	92.5
5	None	90.2	92.9	92.5	94.9	96.9
	0.6		92.5	91.9	94.1	95.5
	1.2		88.4	90.1	94.1	95.6
	1.8		92.8	88.9	93.9	95.6
6	None	88.5	91.1	94.3	96.4	94.9
	0.6		92.4	92.8	95.6	96.1
	1.2		92.3	94.6	95.9	98.8
	1.8		94.9	94.4	96.9	96.1
7	None	91.8	90.0	89.3	89.8	95.2
	0.6		89.3	85.8	90.4	95.6
	1.2		91.7	88.6	89.8	95.6
	1.8		92.6	89.5	92.4	93.6
8	None	88.9	88.0	83.9	92.0	91.8
	0.6		72.9	73.5	91.6	93.8
	1.2		60.0	82.6	89.8	90.4
	1.8		85.0	73.6	91.5	92.9
9	None		91.5			
	0.6		87.4			
	1.2		89.4			
	1.8		86.6			