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Yields of the Field Experiments 1959

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59/R/A/4 Agdell - Grass and Multiple Crops

Rothamsted Research

Rothamsted Research (1960) *59/R/A/4 Agdell - Grass and Multiple Crops* ; Yields Of The Field Experiments 1959, pp 10 - 12 - DOI: <https://doi.org/10.23637/ERADOC-1-179>

59/A/4.3

Maure to turnips until 1948 Plot Rotation	None since 1848		Mineral manure* no nitrogen		Mineral* and nitrogenous manure†		Mean
	5 Fallow	6 Clover	3 Fallow	4 Clover	1 Fallow	2 Clover	

Sugar Beet: Total Sugar cwt per acre

P₂O₅ cwt per acre

None	26.2	30.1	52.5	45.4	37.8	28.0	36.7
0.25	33.4	30.0	53.7	41.6	37.5	30.8	37.8
1.00	34.1	31.6	50.9	43.7	38.5	34.1	38.8
Mean	31.2	30.6	52.4	43.6	37.9	31.0	37.8

Sugar Beet: Tops tons per acre

None	7.43	8.59	8.91	10.49	10.24	8.79	9.08
0.25	9.04	9.32	9.51	10.21	9.12	9.19	9.40
1.00	9.89	11.25	10.16	10.71	10.43	10.37	10.47
Mean	8.79	9.72	9.53	10.47	9.93	9.45	9.65

Barley grain(at 85% dry matter): cwt per acre

None	15.5	12.8	34.1	28.7	21.4	26.1	23.1
0.25	20.2	20.9	34.1	30.7	22.5	27.6	26.0
1.00	26.9	32.0	34.5	35.5	21.5	23.9	29.0
Mean	20.9	21.9	34.2	31.6	21.8	25.9	26.0

Barley straw(at 85% dry matter): cwt per acre

None	18.4	18.9	30.6	29.2	19.3	19.5	22.6
0.25	21.2	22.0	30.1	29.4	20.0	22.5	24.2
1.00	24.2	31.8	32.6	31.8	20.4	20.8	26.9
Mean	21.3	24.2	31.1	30.1	19.9	20.9	24.6

Mean dry matter % as harvested:	Grass	1st cut	23.4
		2nd cut	35.9
		3rd cut	56.7
		Total of 3 cuts	38.7
	Barley	grain	79.0
		straw	63.1

* P, K, Na, Mg.

† Rape dust (or castor meal + ammonium sulphate)

59/A/5.1

MANGOLDS AND SUGAR BEET - BARNFIELD

The 8th and 14th years

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

Cultivations, etc.: Dung applied: Nov 24 - 27, 1958. Dung ploughed in: Dec 3, remainder ploughed: Feb 10, 1959. Fertilizers applied: May 4 - 6. Sugar beet drilled at 19 lb per acre, mangolds drilled at 8 lb per acre: May 11. Singled: June 26 - July 9. Top dressings applied: July 14. Lifted: Oct 22 - Nov 12. Varieties: Mangolds - Yellow Globe, sugar beet - Klein E.

Summary of Results

Strip	Cross dressing				
	0	N	A	AC	C
<u>Mangolds, roots: tons per acre</u>					
1	11.13	20.75	20.26	21.48	15.26
2	10.89	16.99	14.46	16.41	12.29
4	3.82	(a) 10.83* (b) 13.02*	11.40	17.79	12.97
5	2.77	11.91	5.42	6.31	6.95
6	2.38	9.87	9.78	14.87	10.91
7	3.02	12.18	11.83	14.42	11.89
8	3.00	7.24	5.04	6.66	6.60
9	11.65				
<u>Mangolds, leaves: tons per acre</u>					
1	2.08	2.96	3.25	3.44	2.74
2	1.93	2.69	3.08	3.03	2.44
4	1.39	(a) 2.08* (b) 2.76*	2.27	3.59	2.37
5	1.24	2.27	1.95	2.00	2.44
6	1.18	2.76	2.39	3.54	2.12
7	1.37	3.42	3.27	4.45	2.42
8	0.85	2.88	2.15	2.83	2.61
9	2.88				
<u>Mangolds, plant number: thousands per acre</u>					
1	18.5	20.8	20.4	21.0	19.8
2	21.3	22.0	20.7	20.9	20.8
4	20.8	(a) 19.1* (b) 19.8*	20.8	20.0	20.5
5	18.2	21.7	17.3	17.2	19.2
6	15.7	19.4	20.6	20.6	21.2
7	17.8	23.0	20.6	21.7	21.1
8	16.1	20.0	19.5	20.0	20.6
9	21.4				

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

59/A/5.2

Strip	Cross dressing				
	0	N	A	AC	C
<u>Sugar beet, roots (washed): tons per acre</u>					
1	6.63	9.54	9.34	10.82	8.93
2	5.54	7.44*	8.34	8.54	8.57
4	2.05	(b) 6.64	6.44	9.66	7.79
5	2.47	6.63	4.63	5.48	5.58
6	1.60	4.80	6.68	7.80	6.06
7	2.44	6.90	7.05	8.27	6.80
8	2.70	5.84	4.09	5.79	4.92
9	7.14				
<u>Sugar beet, tops: tons per acre</u>					
1	4.30	7.96	7.47	10.75	7.03
2	4.01	6.74*	8.50	8.70	6.89
4	1.71	(b) 5.76	5.03	8.11	4.89
5	2.04	6.40	3.86	7.62	5.76
6	1.47	2.39	4.64	7.86	6.20
7	1.62	8.40	5.18	8.06	7.23
8	1.84	6.06	4.01	5.08	7.08
9	5.81				
<u>Sugar beet, plant number: thousands per acre</u>					
1	22.1	22.2	21.2	22.0	22.8
2	20.1	23.2*	24.3	24.0	24.2
4	19.7	(b) 22.0	22.7	22.0	23.1
5	22.5	21.5	19.7	20.6	22.1
6	18.6	19.1	18.9	20.4	20.8
7	16.6	20.7	20.9	23.7	24.2
8	21.2	22.5	19.1	22.6	19.8
9	19.9				
<u>Sugar beet, sugar percentage</u>					
1	18.0	16.3	16.0	17.1	16.6
2	17.0	15.8*	16.1	16.1	16.7
4	17.0	(b) 16.5	17.4	16.8	17.4
5	16.7	15.8	17.0	15.5	16.4
6	16.9	16.2	17.7	16.9	16.7
7	17.6	15.8	17.6	17.0	16.6
8	17.2	16.2	16.7	15.7	15.7
9	17.1				

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