ROTHAMSTED RESEARCH

Yields of the Field Experiments 1961

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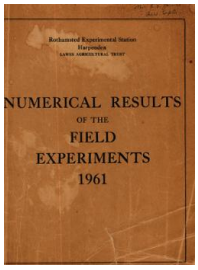

Classical Experiments

Rothamsted Research

Rothamsted Research (1962) *Classical Experiments ;* Yields Of The Field Experiments 1961, pp 5 - 24 **- DOI: https://doi.org/10.23637/ERADOC-1-182**

61/A/1.1

WHEAT - BROADBALK 1961

The 118th year

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

Cultivations, etc.:

Cropped sections. Ground chalk applied: Oct 1, 1960. Ploughed: Oct 4. Dung applied and ploughed in: Oct 10. Autumn fertilisers applied: Jan 17, 1961. Seed drilled at 3 bushels per acre: Jan 18. Spring fertilisers applied: Apr 17. Second dressing of nitrate of soda applied to plot 16: May 3. Section IA sprayed with MCPA/TBA at 4 pints in 40 gallons per acre: May 5. Combined: Sept 1. Variety: Squarehead's Master 13/4.

Fallow section. (Ib) Ploughed: Oct 4, 1960; June 12, 1961; July 17.

Broadbalk Wilderness. N.

Cultivations, etc.: Shrubs grubbed out: Nov 18 - Dec 6, 1960. Part grazed: Dec 30 - Jan 2, 1961; Apr 12 - May 1; May 23 - 30; June 20 - 23; Aug 10 - 15; Sept 24 - 28. The grass was topped after each grazing except the first and the last.

Summary of Results

Grain (at 85% dry matter): cwt per acre

Section	III	IV	VA	VB	II	IA	
Years after fallow	1	2	unlimed 3	limed 3	4	10	Mean
2A	27.7	21.6	19.0	14.8	17.9	15.8	20.6
2B	28.2	22.1	7.6	17.0	21.8	17.0	20.7
3	15.8	10.1	11.5	11.1	12.7	11.4	12.4
5	20.2	13.5	11.6	10.8	14.0	11.8	14.5
6	24.4	16.1	10.1	11.6	16.3	15.1	16.8
7	22.8	16.4	9.6	11.1	18.6	17.6	17.0
8	19.9	13.4	6.8	11.8	23.7	14.9	16.4
9	19.2	15.3	12.7	11.6	17.2	13.1	15.8
10	13.6	19.1	17.8	19.9	20.8	15.9	18.0
11	16.5	16.4	11.6	10.2	16.5	11.6	14.8
12	16.7	15.5	10.5	9.9	16.4	15.7	14.7
13	21.9	10.7	6.8	8.7	19.5	16.5	15.0
14	20.2	10.9	9.0	10.8	14.2	16.8	13.9
15	29.0	11.9	6.8	11.9	16.0	17.2	16.5
16	23.5	15.8	14.6	15.0	21.3	13.7	18.5
17	17.4	9.6	9.0	7.9	10.0	8.9	11.2
18	20.8	18.4	15.8	14.3	21.0	12.7	18.4
19	14.0	6.5	8.5	11.6	14.6	13.3	11.4
20					13.9	13.0	13.6

Mean dry matter % as harvested: 84.4

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61/A/1.2

Straw (at 85% dry matter): cwt per acre

Section	III	IV	VA	VB	II	IA	
Years after fallow	1	2	unlimed 3	limed 3	4	10	Mean
2A	37.4	21.4	25.3	24.3	22.7	21.1	26.1
2B	39.1	26.0	26.6	28.7	29.1	19.6	29.7
3	20.2	8.1	9.5	10.9	10.5	9.6	12.1
5	25.4	13.7	15.8	16.4	18.1	12.7	18.0
6	31.0	19.5	17.5	19.5	19.6	20.7	22.0
7	32.9	24.4	20.6	24.0	26.3	23.4	26.3
8	42.9	29.6	27.8	33.1	37.3	29.3	34.7
9	29.3	21.1	20.7	20.7	19.4	23.2	22.6
10	19.8	21.0	18.8	23.3	21.8	16.9	20.7
11	25.3	20.2	17.8	16.4	18.0	16.7	19.9
12	25.5	23.1	18.6	17.5	20.9	18.9	21.7
13	37.0	20.7	18.0	25.3	29.4	26.6	27.1
14	31.1	21.0	17.3	17.0	19.5	22.8	22.2
15	40.8	17.0	12.8	23.0	23.1	25.0	24.6
16	40.6	29.6	32.9	32.7	32.9	27.1	33.6
17	22.0	9.6	14.6	16.1	12.2	10.3	14.5
18	33.5	26.3	29.4	29.2	28.9	25.2	29.2
19	23.5	10.0	36.3	22.1	17.8	21.5	20.3
20					18.3	19.1	18.5

Mean dry matter % as harvested: 81.5

https://doi.org/10.23637/ERADOC-1-182

61/A/2.1

BARLEY - HOOSFIELD 1961

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

In 1961 all strips drilled for combining were taken for grain yields, except on plots 1N, 2N, 5-0 and 5A where one of the inner two strips only was taken.

For straw yields one of the inner two strips was taken on each plot, except on plots 6-1 and 6-2 where the centre strip of the three, and on plots 7-1 and 7-2 where the northern one of the two, was taken.

Cultivations, etc.: Sprayed with dalapon at 10 lb in 40 gallons per acre: Sept 24, 1960; and again at 5 lb in 40 gallons per acre: Oct 11. Dung applied: Dec 12. Ploughed: Dec 13. Minerals applied: Mar 28, 1961. Nitrogen fertilisers applied: Apr 4. Seed drilled at $2\frac{3}{4}$ bushels per acre: Apr 12. Strips 1, 2 and 3 sprayed with MCPA at $6\frac{1}{2}$ pints in 40 gallons per acre; and strips 4, 6 and 7 sprayed with CMPP at 6 pints in 40 gallons per acre: May 19. Combined: Aug 28. Variety: Plumage Archer.

https://doi.org/10.23637/ERADOC-1-182

61/A/2.2

Summary of Results

Plot	Grain (at 85% dry matter): cwt per acre	Straw (at 85% dry matter): cwt per acre
1 0	10.4	5.6
2 0	13.6	6.6
3 0	9.9	4.6
4 0	14.0	7.3
5 0	10.8	4.4
1 A	12.2	8.3
2 A	20.2	12.9
3 A	14.6	10.1
4 A	24.3	16.0
5 A	18.4	15.9
1 AA	13.7	10.5
2 AA	24.1	15.1
3 AA	14.7	9.5
4 AA	24.6	16.5
1 AAS	20.1	11.9
2 AAS	25.9	15.0
3 AAS	19.4	12.3
4 AAS	26.3	15.1
1 C	21.9	12.2
2 C	25.0	14.0
3 C	21.5	13.9
4 C	27.3	16.2
7 - 1	12.8	6.3
7 - 2	26.4	15.8
6 - 1	9.2	5.1
6 - 2	11.1	5.9
1 N	11.6	8.1
2 N	17.6	10.8
Mean dry matter % as harvested:	85.2	87.2

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61/A/3

WHEAT AFTER FALLOW - HOOSFIELD 1961

Without manure 1851 and since

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

Area harvested: 0.0331 acres.

Cultivations, etc.:
Cropped plots. Ploughed: Sept 21, 1960. Seed sown at 3 bushels per acre: Jan 17, 1961. Combine harvested: Sept 1. Variety: Squarehead's Master 13/4.
Fallowed plots. Ploughed three times: Sept 21, 1960; June 14, 1961; July 18.

Note: Counts of straw number and estimates of Eyespot (Cercosporella herpotrichoides) and Take-all (Ophiobolus graminis) were made.

Summary of Results

Grain (at 85% dry matter): cwt per acre

Plot	B_2	B_3	B_4	Mean
No. of years of fallow	1	1	3	
	10.0	8.9	10.0	9.6

Mean dry matter % as harvested: 82.7

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61/A/4.1

GRASS AND MULTIPLE CROPPING AND DIRECT AND RESIDUAL P

AGDELL 1961

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

Multiple cropping 1961

In order to investigate further the residues of past treatments by testing methods of incorporating P fertiliser in the soil, the crop strips on 3 of the old rotation plots (numbers 1, 3 and 5) were split lengthways to give two sub plots for each of the three 1959 treatments. The new sub plots carry the treatments described below. The areas carrying strip crops in 1960 on plots numbers 2, 4 and 6 were bare fallowed. Yields were taken from the cocksfoot ley sown in 1960.

Rotation (commencing 1959): barley, potatoes, sugar beet.

Area of each sub plot (acres): 0.0050. Area harvested: 0.0035.

Treatments per acre: None; 0.75; 1.50 cwt P_2O_5 either ploughed in or applied in seedbed; also 0.75 cwt P_2O_5 ploughed in plus 0.75 cwt P_2O_5 in seedbed; 1.5 cwt P_2O_5 ploughed in plus 1.5 cwt P_2O_5 in seedbed. P_2O_5 as superphosphate; for potatoes "seedbed" P was applied in bouts.

Basal dressings per acre. To grass: as 1959.
To barley: 0.3 cwt K_2O ploughed in, and 0.6 cwt N, 0.6 cwt K_2O broadcast in seedbed as compound fertiliser, 16% N, 16% K_2O.
To potatoes: 0.6 cwt K_2O ploughed in, 0.6 cwt K_2O after ploughing, 1.2 cwt N and 1.2 cwt K_2O as compound fertiliser, 16% N, 16% K_2O applied to ridged land before planting.
To sugar beet: 1.0 cwt K_2O ploughed in, 1.0 cwt K_2O after ploughing, 1.0 cwt N and 1.0 cwt K_2O as compound fertiliser, 16% N, 16% K_2O broadcast in seedbed.

Note: Apart from the NK compound fertiliser, K_2O was applied as sulphate of potash.

Cultivations, etc.:
Grass. 'Nitro-Chalk' applied: Mar 9, 1961. Cut 3 times: May 17, July 18, Sept 15. 'Nitro-Chalk' applied after 2nd cut.
Fallow areas. Ploughed: Jan 17, 1961. Rotary cultivated: May 11, June 3.
Microplots. Fertilisers applied for ploughing in: Dec 5, 1960. Ploughed: Jan 17, 1961.
Barley: Seedbed fertilisers applied, seed drilled at 3 bushels per acre: Mar 16, 1961. Harvested: Aug 9. Variety: Proctor.
Potatoes: K applied after ploughing: Mar 7, 1961. Rotary cultivated and ridged, fertilisers applied in the bouts: Apr 25. Potatoes planted: May 1.

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Sprayed 3 times with demeton methyl at 12 fluid oz in 40 gallons per acre: June 7 and 16, July 11. Sprayed twice with copper fungicide at 5 lb in 40 gallons per acre: Aug 15, Sept 1. Lifted: Sept 25. Variety: Majestic (chitted).

Sugar beet. K applied after ploughing: Mar 7, 1961. Seedbed fertilisers applied, seed drilled at 20 lb per acre: Mar 23. Singled: May 29. Sprayed 3 times with demeton methyl at 12 fluid oz in 40 gallons per acre: June 7 and 16, July 11. Lifted: Oct 10. Variety: Klein E.

Summary of Results

Manure to turnips until 1948	None since 1848		Mineral manure* no nitrogen		Mineral* and nitrogeneous manure+		
Plot	5	6	3	4	1	2	
Rotation	Fallow	Clover	Fallow	Clover	Fallow	Clover	Mean
Grass dry matter: cwt per acre							
1st cut	17.2	13.2	31.5	31.4	34.3	26.9	25.8
2nd cut	11.3	12.5	16.7	17.8	19.1	17.8	15.9
3rd cut	9.1	7.8	14.6	13.4	17.8	14.9	13.0
Total of 3 cuts	37.7	33.6	62.8	62.6	71.3	59.6	54.6

Mean dry matter % as cut:

1st cut	22.8
2nd cut	27.0
3rd cut	25.2
Total of 3 cuts	25.0

*P, K, Na, Mg.

+Rape dust (or castor meal + ammonium sulphate).

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Fallow rotation only

Manure to turnips until 1948 Plot	None since 1848 5	Mineral* manure no nitrogen 3	Mineral* and nitrogenous+ manure 1	Mean
Barley, Grain (at 85% dry matter): cwt per acre				
P_2O_5 cwt per acre				
None	19.0	27.7	13.7	20.1
Ploughed in				
0.75	16.4	30.9	7.8	18.4
1.50	24.1	23.4	32.4	26.6
Broadcast				
0.75	25.5	32.5	27.9	28.6
1.50	18.7	32.6	22.6	24.6
½ Ploughed in ½ Broadcast				
1.50	22.5	31.8	24.5	26.3
3.00	31.2	29.6	31.8	30.9
Mean	22.0	29.5	21.8	24.5
Barley, Straw (at 85% dry matter): cwt per acre				
P_2O_5 cwt per acre				
None	33.8	46.5	32.8	37.7
Ploughed in				
0.75	31.8	55.7	28.8	38.8
1.50	40.1	49.6	57.3	49.0
Broadcast				
0.75	42.7	62.7	48.6	51.3
1.50	38.4	57.7	42.3	46.1
½ Ploughed in ½ Broadcast				
1.50	44.5	54.2	45.8	48.2
3.00	51.4	53.5	56.9	53.9
Mean	39.6	53.3	43.2	45.3

Mean dry matter % as harvested: Grain 78.7
Straw 52.9

*P, K, Na, Mg.

+Rape dust (or castor meal + ammonium sulphate).

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Fallow rotation only

Manure to turnips until 1948 Plot	None since 1848 5	Mineral* manure no nitrogen 3	Mineral* and nitrogeneous manure 1	Mean
Potatoes, total tubers: tons per acre				
P_2O_5 cwt per acre				
None	8.26	12.04	8.76	9.69
Ploughed in				
0.75	9.71	11.05	11.03	10.60
1.50	9.23	12.58	11.79	11.20
Broadcast				
0.75	9.54	11.36	11.79	10.90
1.50	9.47	11.86	12.21	11.18
½ Ploughed in ½ Broadcast				
1.50	9.93	12.96	10.48	11.12
3.00	9.90	12.02	12.48	11.47
Mean	9.29	11.99	10.91	10.73
Sugar beet, Roots (washed): tons per acre				
P_2O_5 cwt per acre				
None	15.14	19.64	17.06	17.28
Ploughed in				
0.75	17.32	25.03	15.43	19.26
1.50	15.46	20.47	15.66	17.20
Broadcast				
0.75	15.19	17.91	16.24	16.45
1.50	17.53	20.32	18.47	18.78
½ Ploughed in ½ Broadcast				
1.50	18.17	21.80	20.08	20.02
3.00	17.66	24.63	20.72	21.00
Mean	16.45	21.18	17.59	18.41
Sugar beet, Sugar percentage				
P_2O_5 cwt per acre				
None	15.7	15.9	15.9	15.8
Ploughed in				
0.75	16.4	15.4	15.8	15.9
1.50	16.1	16.0	16.2	16.1
Broadcast				
0.75	15.7	16.2	15.7	15.9
1.50	15.3	16.4	15.7	15.8
½ Ploughed in ½ Broadcast				
1.50	15.8	16.4	16.0	16.1
3.00	16.2	16.5	16.1	16.3
Mean	15.9	16.1	15.9	16.0

*P, K, Na, Mg.

+Rape dust (or castor meal + ammonium sulphate).

https://doi.org/10.23637/ERADOC-1-182

Fallow rotation only

Manure to turnips until 1948 Plot	None since 1848 5	Mineral* manure no nitrogen 3	Mineral* and nitrogeneous manure 1	Mean
Sugar beet, Total sugar: cwt per acre				
P_2O_5 cwt per acre None	46.9	62.0	53.8	54.2
Ploughed in 0.75	56.0	76.4	48.0	60.1
1.50	49.4	64.2	49.5	54.4
Broadcast 0.75	46.8	57.5	49.9	51.4
1.50	53.6	66.0	57.0	58.9
½ Ploughed in ½ Broadcast 1.50	57.1	70.7	63.2	63.7
3.00	56.5	80.7	65.7	67.7
Mean	51.7	67.5	55.1	58.1
Sugar beet, Tops: tons per acre				
P_2O_5 cwt per acre None	11.48	12.72	12.64	12.28
Ploughed in 0.75	11.35	16.74	10.66	12.92
1.50	10.55	12.28	11.05	11.29
Broadcast 0.75	10.80	11.23	14.11	12.05
1.50	13.70	15.43	14.17	14.44
½ Ploughed in ½ Broadcast 1.50	13.29	11.99	13.06	12.78
3.00	13.16	16.68	14.47	14.77
Mean	11.98	13.73	12.85	12.85

*P, K, Na, Mg.

+Rape dust (or castor meal + ammonium sulphate).

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61/A/5

HAY - THE PARK GRASS PLOTS 1961

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

Cultivations, etc.: Mineral fertilisers applied: Dec 9, 1960. Dung applied to appropriate plots: Dec 12. Nitrogenous fertilisers applied: 1st dressing - Mar 28, 1961; 2nd dressing - Apr 26. Cut twice: June 20 and Sept 21.

Summary of Results

Dry matter: cwt per acre

Plot	Not limed 1st crop	Not limed 2nd crop	Not limed Total	Limed 1st crop	Limed 2nd crop	Limed Total
1	9.2	3.5	12.7	25.4	6.4	31.8
2	14.1	5.0	19.1	23.6	6.4	30.0
3	11.1	3.5	14.6	22.6	5.2	27.8
4-1	20.0	5.4	25.4	23.3	5.3	28.6
4-2	20.9	5.9	26.8	30.0	5.9	35.9
5-1	11.0	4.5	15.5			
5-2	21.1	9.4	30.5			
6	28.0	8.9	36.9			
7	29.9	7.3	37.2	48.4	16.9	65.3
8	21.2	5.2	26.4	24.5	7.0	31.5
9	43.4	7.3	50.7	50.4	7.4	57.8
10	27.8	7.8	35.6	38.1	6.6	44.7
11-1	55.9	14.5	70.4	53.4	14.1	67.5
11-2	57.1	17.9	75.0	57.1	19.3	76.4
12	14.5	6.2	20.7			
13	42.0	11.5	53.5	44.1	19.2	63.3
14	43.5	10.1	53.6	50.0	8.5	58.5
15	31.4	7.5	38.9	42.4	11.6	54.0
16	35.8	7.4	43.2	45.5	12.0	57.5
17	23.8	4.1	27.9	30.2*	4.7*	34.9*
18	16.5	3.1	19.6	26.4+	4.1+	30.5+
				26.1*	4.3*	30.4*
19	41.3	9.6	50.9	49.0*	11.7+	60.7+
				43.7+	12.5*	56.2*
20	46.2	12.1	58.3	48.8*	12.2+	61.0+
				41.1+	13.5+	54.6+

*Heavy liming. +Light liming.

Mean dry matter % as cut: 1st crop 27.7; 2nd crop 28.4

https://doi.org/10.23637/ERADOC-1-182

BARLEY - EXHAUSTION LAND HOOSFIELD 1961

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

Basal dressing: 0.5 cwt N per acre as 'Nitro-Chalk'.

Cultivations, etc.: Sprayed with dalapon at 10 lb in 40 gallons per acre: Oct 12, 1960; and again at 5 lb in 40 gallons per acre: Nov 14. Ploughed: Dec 16. 'Nitro-Chalk' applied: Mar 29, 1961. Seed drilled at 2¾ bushels per acre: Apr 12. Sprayed with CMPP at 6 pints in 40 gallons per acre: May 19. Combine harvested: Aug 29. Variety: Plumage Archer.

Summary of Results

Barley

Yields (at 85% dry matter): cwt per acre

Plots not cross cropped in 1957 and 1958

Plot.	Manuring to potatoes 1876 - 1901*	Grain	Straw
2	Unmanured after dung 1876 - 81	15.8	10.0
4	Dung	25.5	15.4
6	Nitrate of soda	15.6	10.0
8	Nitrate of soda and complete minerals	21.8	12.8
10	Complete minerals	23.6	12.2

Plots cross cropped in 1957 and 1958

Plot.	Manuring to potatoes 1876 - 1901*	Grain	Straw
1	Unmanured	17.5	11.0
3	Dung	23.9	14.7
5	Ammonium salts	17.0	10.2
7	Ammonium salts and complete minerals	21.5	13.4
9	Superphosphate	22.4	13.2
Mean dry matter % as harvested (all plots):		86.3	89.9

*For certain changes see history.

Erratum: "Results of the Field Experiments" 1960 p. 60/A/6. In the Summary of Results delete the words 'and combine harvested in 1959' from both headings.

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61/A/7

CLOVER - ROTHAMSTED GARDEN 1961

The 108th year

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

Molybdenum test 1961: The two plots were sub-divided as in 1960 for a test of molybdenum:-

None; 1 lb sodium molybdate per acre, applied by adding the appropriate quantity in solution in water to dry sand, broadcasting and raking in.

Cultivations, etc.: Muriate of potash applied at 2 cwt per acre: Nov 16, 1960. Ground chalk applied at 30 cwt per acre, plots dug and old clover plants removed: Mar 16, 1961. Second dressing of muriate of potash at 2 cwt per acre and ground chalk at 30 cwt per acre applied: Mar 17. Sodium molybdate applied and seed sown at 40 lb per acre: Apr 13. Cut twice: Sept 4 and Nov 1. Variety: Late Flowering Red S123.

Note: Germination on the perimeter of the area of the plots was poor. This was still noticeable at the time of the 1st cut; but the plant had evened out at the time of the second cut.

Summary of Results

Dry matter: cwt per acre

Muriate of potash: cwt per acre	Spray: None	Spray: Sodium molybdate	Mean
1st cut			
None	6.7	1.4	4.0
4	21.2	12.9	17.0
Mean	14.0	7.2	10.6
2nd cut			
None	2.4	0.4	1.4
4	7.4	8.2	7.8
Mean	4.9	4.3	4.6
Total of 2 cuts			
None	9.1	1.8	5.4
4	28.6	21.1	24.8
Mean	18.8	11.4	15.2

Mean dry matter % as harvested:

1st cut	17.2
2nd cut	17.0
Total of 2 cuts	17.1

61/A/8.1

WHEAT AND BARLEY, AND BARLEY, POTATO AND SUGAR BEET MICROPLOTS - WOBURN STACKYARD 1961

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

Strip cropping and microplots 1961: Wheat and barley were sown in strips as in 1960. The microplots were continued with crops interchanged, and were extended to include a strip of sugar beet along their south eastern edge, following wheat in 1960. Plots 7, 8 and 9 of the Continuous Wheat experiment were bare fallowed.

Area of each main plot (acres):		Area harvested (acres):	
10a - 11b	0.0274	10	0.0200
		11 Wheat -	0.0100,
		Barley -	0.0200
Remainder	0.0411	Variable	0.0070 - 0.0240

Area of each microplot (acres):		Area harvested (acres):	
11a and 11b	0.0034	Barley	0.0019
		Potatoes	0.0014
		Sugar beet	0.0017
Remainder	0.0026	Barley	0.0013
		Potatoes	0.0010
		Sugar beet	0.0012

Treatments to microplots only, either ploughed in or applied in seedbed (on flat before planting potatoes):

P test. None; 0.25 (P_1); 1.0 (P_4) cwt P_2O_5 per acre (barley, potatoes and sugar beet). Basal dressing: K at highest rate tested on each crop, ploughed in.

K test. None; 0.15 (K_1); 0.60 (K_4) cwt K_2O per acre (barley).
None; 0.45 (K_3); 1.80 (K_{12}) cwt K_2O per acre (potatoes).
None; 0.9 (K_6); 3.6 (K_{24}) cwt K_2O per acre (sugar beet).
Basal dressing: 1.0 cwt P_2O_5 per acre ploughed in.
P as superphosphate, K as sulphate of potash.

Note: A measurement of the residues of 1960 treatments P_4, K_4 and K_8 was made and the plots concerned received basal N and P or K at appropriate rates.

Basal dressings per acre (N as 'Nitro-Chalk'):-
To wheat and barley: 0.9 cwt N.
To microplots (P test and K test):-
Potatoes: 1.2 cwt N.
Barley: 0.6 cwt N.
Sugar beet: 1.0 cwt N.

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Cultivations, etc.:

Wheat: Ploughed: Sept 26, 1960. Seed drilled at 3 bushels per acre: Jan 17, 1961. Winter wheat ploughed in owing to bird damage: Mar 21. 'Nitro-Chalk' applied, seed drilled at 3 bushels per acre: Mar 22. Sprayed with MCPA/TBA at 4 pints in 40 gallons per acre: May 9. Combine harvested: Aug 28. Variety: Jufy I.

Barley: Ploughed twice: Sept 27, 1960 and Feb 10, 1961. 'Nitro-Chalk' applied, seed drilled at 3 bushels per acre: Mar 9. Sprayed with MCPA/TBA at 4 pints in 40 gallons per acre: May 9. Combine harvested: Aug 28. Variety: Plumage Archer.

Microplots. Basal PK and ploughed in treatment fertilisers applied: Jan 24, 1961. Plots ploughed: Jan 25.

Potatoes: Basal N and broadcast treatment fertilisers applied on the flat, chitted seed planted by machine: Mar 22, 1961. Sprayed twice with demeton methyl at 12 fluid oz in 40 gallons per acre: June 6 and July 11. Sprayed twice with copper fungicide at 5 lb in 40 gallons per acre: Aug 18 and Aug 31. Lifted: Sept 21. Variety: Majestic.

Barley: Basal N and broadcast treatment fertilisers applied, seed drilled at 2¾ bushels per acre: Mar 9, 1961. Harvested: Aug 10. Variety: Plumage Archer.

Sugar beet: Basal N and broadcast treatment fertilisers applied, seed drilled at 12 lb per acre: Apr 12, 1961. Lifted: Oct 16. Variety: Klein E.

Erratum to "Results of the Field Experiments" 1960.
Page 60/A/8.1 the 4th line should read "strips as in 1959 ... "

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61/A/8.3

Summary of Results

Main plots

Crop in 1961	Spring wheat		Barley	
Crop in old scheme	Continuous wheat	Continuous barley	Continuous wheat	Continuous barley
Grain (at 85% dry matter): cwt per acre				
Plot 1	4.1	8.8	14.9	8.9
2	5.6	8.6	10.1	12.3
3	10.0	10.5	12.7	10.8
4	5.5	10.7	21.7	15.7
5	9.3	15.3	18.9	15.3
6	16.2	20.9	21.5	19.6
7	13.0	11.7		
8	11.2	12.7		
9	16.3	14.9		
10 ax	14.1	12.8	13.6	14.5
10 bx	15.0	15.0	14.1	9.7
10 ay	14.2	14.7		
10 by	18.4	20.2		
11 ay			20.0	18.0
11 by			23.3	19.1
11 az	15.2	9.8		
11 bz	14.2	12.5		
Straw (at 85% dry matter): cwt per acre				
Plot 1	10.4	12.3	9.1	5.1
2	7.1	7.9	5.5	4.5
3	10.0	9.2	5.6	5.5
4	14.8	11.0	13.2	7.1
5	9.7	11.4	8.7	7.0
6	11.5	18.8	11.1	10.5
7	11.9	11.4		
8	13.2	21.5		
9	15.4	21.9		
10 ax	9.3	12.0	4.7	6.3
10 bx	10.6	11.4	5.3	4.8
10 ay	9.1	14.6		
10 by	11.1	13.3		
11 ay			8.1	6.5
11 by			12.7	9.8
11 az	17.6	13.9		
11 bz	26.5	19.4		

Mean dry matter % as harvested:	Grain 84.4	85.2
	Straw 89.7	90.8

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Microplots

Crop in old scheme	Continuous wheat	Barley		Continuous barley	
Treatment	11a & 11b	11a 11b	9	8	7
P K	Grain (at 85% dry matter): cwt per acre				
0 4		20.9	25.3	25.1	22.2
1 4		21.9	25.7	24.4	23.7
4 4		25.8	24.9	27.2	25.5
(4)4		24.7	25.4	24.1	19.2
0 4*		26.1	25.4	23.4	17.9
1 4*		27.2	26.6	26.4	20.6
4 4*		24.7	27.9	23.8	21.2
(4)4*		28.1	23.6	23.9	17.9
4 0	26.0		22.1	22.8	25.6
4 1	26.5		25.4	25.9	27.6
4 4	24.5		26.3	24.6	27.0
4(8)	25.1		25.7	27.4	27.9
4 0*	23.5		28.1	25.4	25.9
4 1*	24.5		27.2	27.9	25.6
4 4*	26.0		25.7	25.7	26.2
4(8)*	23.4		28.4	24.2	25.8

Mean dry matter % as harvested: 84.3

P K	Straw (at 85% dry matter): cwt per acre				
0 4		24.8	32.2	22.8	25.4
1 4		29.4	27.1	29.5	25.3
4 4		35.2	36.4	30.2	31.9
(4)4		32.3	33.1	27.9	23.7
0 4*		31.7	32.5	30.2	20.8
1 4*		32.1	32.5	30.2	22.8
4 4*		36.4	36.7	35.2	24.0
(4)4*		25.3	25.8	29.5	21.0
4 0	36.0		34.9	26.7	29.2
4 1	30.4		32.0	30.9	31.0
4 4	39.4		32.7	27.9	31.7
4(8)	35.4		30.9	31.1	32.1
4 0*	32.6		33.1	33.3	30.1
4 1*	34.9		30.4	31.4	29.1
4 4*	33.8		29.6	33.5	31.8
4(8)*	25.6		32.7	30.7	32.2

Mean dry matter % as harvested: 82.4

( ) Indicates applied in 1960. * Indicates applied to seedbed, remainder ploughed in.

All values based on 1 microplot only.

Microplots

Crop in old scheme	Continuous wheat	Potatoes	Continuous barley		
Treatment	11a & 11b	11a & 11b	9	8	7
P K	Total tubers: tons per acre				
0 4		14.43	12.27	13.66	11.58
1 4		15.06	15.28	14.58	12.50
4 4		13.78	14.12	13.20	12.96
(4)4		16.51	14.12	13.66	13.20
0 4*		13.78	13.66	12.73	10.88
1 4*		15.06	12.50	11.81	11.34
4 4*		16.19	14.12	13.43	12.73
(4)4*		16.03	13.66	14.12	11.11
4 0	9.62		12.96	12.04	8.33
4 3	8.81		12.50	13.20	11.11
4 12	9.78		14.58	15.51	12.73
4(4)	10.10		13.66	12.04	8.33
4 0*	10.90		12.04	13.89	8.57
4 3*	11.54		11.81	11.58	10.42
4 12*	12.82		15.05	13.43	10.65
4(4)*	11.22		12.04	10.88	10.42
P K	Percentage ware ($1\frac{5}{8}$ inch riddle)				
0 4		100.0	96.2	93.2	96.0
1 4		95.7	97.0	96.8	96.3
4 4		94.2	98.4	94.7	94.6
(4)4		93.2	95.1	94.9	94.7
0 4*		96.5	94.9	94.5	91.5
1 4*		94.7	98.1	98.0	95.9
4 4*		94.1	93.4	94.8	92.7
(4)4*		96.0	93.2	93.4	95.8
4 0	91.7		94.6	92.3	94.4
4 3	90.9		94.4	94.7	91.7
4 12	91.8		95.2	94.0	94.5
4(4)	92.1		93.2	90.4	91.7
4 0*	95.6		94.2	91.7	94.6
4 3*	95.8		96.1	90.0	91.1
4 12*	95.0		96.9	93.1	95.7
4(4)*	92.9		94.2	93.6	95.6

( ) Indicates applied in 1960. * Indicates applied to seedbed, remainder ploughed in.

All values based on 1 microplot only.

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Microplots

Crop in old scheme	Continuous wheat	Sugar beet	Continuous barley		
Treatment	11a & 11b	11a & 11b	9	8	7
P K	Roots (washed): tons per acre				
0 24	15.52		12.56	11.58	11.42
1 24	16.00		14.56	11.90	13.28
4 24	15.06		13.41	12.16	12.33
0 *24	13.94		13.60	12.86	10.84
1 *24	13.92		11.37	10.72	11.64
4 *24	13.57		13.87	10.32	11.11
4 0		12.81	9.16	11.91	6.11
4 6		13.11	13.46	10.90	11.16
4 12		15.51	11.32	11.92	10.90
4 24		15.34	14.27	12.44	11.00
4 0*		14.07	10.45	9.75	8.61
4 6*		14.46	11.22	9.72	9.59
4 12*		12.76	12.56	14.23	12.98
4 24*		14.29	13.30	13.10	13.97
P K	Sugar percentage				
0 24	16.2		15.8	15.4	15.0
1 24	16.0		15.8	14.9	15.6
4 24	16.4		15.5	15.5	15.2
0 *24	15.8		15.8	15.0	14.8
1 *24	14.9		15.2	15.6	14.9
4 *24	16.2		15.7	15.3	15.6
4 0		16.0	15.9	14.9	14.9
4 6		15.9	15.6	15.4	15.3
4 12		15.9	16.2	15.4	15.2
4 24		15.5	15.3	15.1	15.0
4 0*		16.2	15.0	15.1	14.8
4 6*		16.2	15.7	15.1	15.5
4 12*		16.2	15.8	15.6	15.2
4 24*		16.2	16.4	15.6	15.0

All values based on 1 microplot only except $\frac{P\ K}{0\ 24}$ which are based on 2.

*Indicates applied to seedbed, remainder ploughed in.

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Microplots

Crop in old scheme	Continuous wheat	Sugar beet	Continuous barley		
Treatment	11a & 11b	11a & 11b	9	8	7
P K	Total sugar: cwt per acre				
0 24	50.3		39.6	35.6	34.2
1 24	51.0		46.1	35.4	41.4
4 24	49.5		41.6	37.7	37.5
0 24*	44.0		43.0	38.5	32.1
1 24*	41.5		34.5	33.5	34.7
4 24*	43.9		43.6	31.6	34.6
4 0		40.9	29.1	35.6	18.2
4 6		41.6	42.0	33.5	34.1
4 12		49.2	36.6	36.8	33.1
4 24		47.4	43.6	37.5	33.0
4 0*		45.6	31.3	29.4	25.5
4 6*		46.9	35.2	29.3	29.7
4 12*		41.3	39.6	44.4	39.3
4 24*		46.2	43.7	40.9	41.8

All values based on 1 microplot only except $\frac{P\ K}{0\ 24}$ which are based on 2.

*Indicates applied to seedbed, remainder ploughed in.

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