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Yields of the Field Experiments 1958

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Classical Experiments

Rothamsted Research

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WHEAT - BROADBALK 1958

The 115th year

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

Cultivations, etc.:

Cropped sections. Dung applied: Sept 4, 1957. Ploughed: Sept 3-17. Ground chalk applied: Sept 9-16. Autumn fertilizers applied, seed drilled at $2\frac{3}{4}$ bushels per acre: Nov 20. Section 1A under continuous wheat sprayed with CMPP at 6 pints in 40 gallons per acre, spring fertilizers applied: Apr 30, 1958. Second dressing of nitrate of soda applied to plot 16: May 15. Combine harvested: Sept 9. Variety: Squareheads Master 13/4.

Fallow section. (V) Ploughed: Sept 3-17, 1957, May 7-9, 1958, July 29-31.

On a few plots an estimate was made of the chaff, cavings, dust, etc., not picked up by the baler.

Broadbalk Wilderness. N.

Cultivations, etc.: Shrubs grubbed out: Dec 2-6, 1957. Part mown: Apr 17, 1958, May 1, May 20, June 11, July 16, Aug 8, Oct 1.

Summary of Results

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

Section Years after fallow	II	IB	III	IV	IA	Mean
	1	2	3	4	7	
2A	23.4	21.7	21.1	22.7	24.2	22.4
2B	24.1	23.5	27.6	26.5	27.7	25.8
3	20.5	11.5	11.7	12.8	17.3	14.7
5	14.1	7.5	14.8	18.6	21.0	15.0
6	18.9	13.3	19.8	21.5	22.3	19.3
7	21.8	21.9	23.5	21.6	25.0	22.4
8	24.9	24.7	24.7	23.3	26.0	24.4
9	26.1	20.7	19.2	19.6	24.1	20.7
10	18.5	21.1	18.1	18.9	19.0	18.9
11	14.5	19.5	16.0	17.8	15.9	16.6
12	15.5	21.8	17.4	20.2	21.2	18.5
13	26.1	22.3	21.0	20.5	22.0	22.5
14	16.8	22.0	19.0	20.4	22.7	19.5
15	27.8	19.3	19.7	16.9	20.9	21.1
16	24.9	21.3	22.5	20.9	20.3	22.4
17	27.2	18.4	22.8	22.4	25.8	23.4
18	21.4	10.5	11.8	12.4	11.7	14.3
19	25.3	20.9	17.4	15.5	20.3	19.7
20	21.2	17.3	-	-	21.0	19.7

58/A/1.2

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

Section Years after fallow	II	IB	III	IV	IA	Mean
	1	2	3	4	7	
2A	42.6	30.8	30.3	29.9	23.1	33.0
2B	54.4	38.6	38.6	38.3	14.0	41.1
3	23.1	14.6	18.0	16.5	42.1	19.7
5	20.4	16.5	16.2	18.7	23.2	18.5
6	34.1	19.6	26.0	29.0	26.8	28.1
7	36.0	41.3	32.2	34.8	20.5	34.4
8	25.5	43.1	37.8	39.5	17.2	34.3
9	46.8	20.5	31.2	29.6	48.8	33.3
10	22.7	26.3	23.3	23.2	23.5	23.7
11	20.2	23.3	19.5	22.2	18.0	21.0
12	22.8	27.7	21.5	28.3	25.3	24.7
13	43.1	35.0	28.8	33.6	29.8	34.8
14	21.1	19.6	23.1	27.7	32.8	23.9
15	43.5	32.0	30.3	34.3	31.0	35.2
16	37.1	34.4	33.2	30.2	24.3	33.0
17	41.4	24.8	31.6	31.4	37.2	33.6
18	33.6	17.5	19.7	20.6	14.8	21.9
19	34.3	31.5	27.7	28.7	24.6	30.0
20	27.9	26.0	-	-	27.2	27.1

Mean dry matter % as harvested: Grain 77.5
Straw 84.6

58/A/2

BARLEY - HOOSFIELD 1958

The 107th year

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

Cultivations, etc.: Ploughed: Sept 9 and again Nov 22, 1957. Dung applied: Nov 25. Fertilizers applied: Apr 17, 1958. Seed drilled at $2\frac{3}{4}$ bushels per acre: Apr 21. Sprayed with OMPP at 6 pints in 40 gallons per acre: May 28. Combine harvested: Sept 9. Variety: Plumage Archer.

In 1958 the plots were combine harvested for the first time, a single cut being made down the centre of each plot (including plots 1N and 5 - 0) for the full length, except on strips 1 and 3, where five combine cuts were taken per plot and weighed separately. The yields shown were estimated from the totals of these cuts.

Summary of Results

Plot	Grain (at 85% dry matter): cwt per acre	Straw (at 85% dry matter): cwt per acre
1 0	4.1	6.0
2 0	6.7	6.9
3 0	5.3	7.4
4 0	6.6	10.6
5 0	8.8	8.9
1 A	7.7	9.9
2 A	17.3	15.0
3 A	9.2	12.6
4 A	16.3	14.4
5 A	15.7	20.1
1 AA	10.1	13.5
2 AA	22.0	20.8
3 AA	11.5	16.1
4 AA	15.5	15.7
1 AAS	19.8	21.1
2 AAS	25.5	22.7
3 AAS	18.4	19.8
4 AAS	19.6	18.3
1 C	18.1	17.2
2 C	18.8	16.4
3 C	16.8	14.0
4 C	17.4	14.6
7 - 1	9.7	11.8
7 - 2	27.2	19.6
6 - 1	4.3	6.9
6 - 2	6.4	6.1
1 N	7.8	12.6
2 N	15.0	16.2
Mean dry matter % as harvested:	79.5	81.7

58/A/3.1

WHEAT AFTER FALLOW - HOOSFIELD 1958

Without manure 1851 and since

For history, treatments, etc. see "Details of the Classical and Long Term Experiments" 1956. In 1957 the original plots were reduced in size to 0.0337 acres to provide additional land for the study of Wheat Bulb Fly.

Area harvested: 0.0335 acres.

Cultivations, etc.:

Cropped plots. Ploughed: Sept 2, 1957. Seed sown at 3 bushels per acre: Oct 15. Combine harvested: Sept 5, 1958.

Variety: Squareheads Master 13/4.

Fallowed plots. Ploughed: Sept 2, 1957

Summary of Results

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

Plot	A ₃	A ₄	A ₁	Mean
No. of years of fallow	1	1	3	
	8.2	8.3	11.6	9.4

Mean dry matter % as harvested: 72.4

58/A/3.2

GRASS - AGDELL 1958

Measurement of fertilizer residues

For history, treatments, etc. see "Details of the Classical and Long Term Experiments" 1956. In 1958 each plot was split into two for grass and bare fallow and manured with nitrogenous fertilizers only.

Area harvested: 0.0092 acres.

Basal dressing: None to fallow. To grass: 0.8 cwt N per acre as 'Nitro-Chalk' in spring and for each silage cut.

Cultivations, etc.: Ploughed: Nov 22, 1957. Nitrogen fertilizer applied: Apr 23, 1958. Seed sown at 60 lb per acre: Apr 24. The whole field sprayed with MCPA at 4 pints in 40 gallons per acre: May 27, and at 6 pints in 40 gallons per acre: July 8. Cut twice: July 31 and Oct 28. Nitrogenous fertilizer applied: Au. 1. Fallow plots ploughed: Aug 8. Variety: Italian Ryegrass S22.

Summary of Results

Dry matter: cwt per acre

Manure to turnips until 1948	None since 1848		Mineral manure*		Mineral* and nitrogenous manure ⁺		Mean
	5	6	3	4	1	2	
Plot rotation	Fallow	Clover	Fallow	Clover	Fallow	Clover	
1st cut	5.1	4.2	15.3	14.3	23.4	22.4	14.1
2nd cut	29.0	27.2	30.6	29.4	30.4	30.0	29.4
Total of 2 cuts	34.1	31.4	45.9	43.7	53.8	52.4	43.5

*P, K, Na, Mg.

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

Mean dry matter % as cut, 1st cut: 20.4
2nd cut: 16.3

MANGOLDS AND SUGAR BEET - BARNFIELD

The 83rd and 13th years

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

Cultivations, etc.: Dung applied, ploughed: Nov 25, 1957.

Fertilizers applied: May 5, 1958. Sugar beet drilled at 18 lb per acre, mangolds drilled at 8 lb per acre: May 8. Singled: June 11 to July 5. Sprayed with demeton methyl at 12 oz in 40 gallons per acre: July 7. Top dressings applied: July 14. Lifted: Oct 11 - Nov 21. Varieties: Mangolds - Yellow Globe, sugar beet - Klein E.

Summary of Results

Strip	Cross Dressing				
	O	N	A	AC	C
Mangolds, roots: tons per acre					
1	12.74	31.56	28.54	24.15	17.27
2	17.06	36.47	30.34	30.34	25.70
4	6.38	(a) 26.80* (b) 27.47*	22.13	28.63	20.34
5	4.93	20.44	16.17	18.64	14.51
6	4.82	19.73	19.68	26.63	20.84
7	5.84	21.52	20.44	26.87	21.06
8	1.93	16.34	13.95	19.70	15.27
9	19.80				
Mangolds, leaves: tons per acre					
1	2.42	5.69	5.59	6.23	4.01
2	2.69	6.62	5.54	8.04	5.67
4	1.32	(a) 5.52* (b) 5.01*	3.64	6.77	4.27
5	0.98	4.03	3.35	3.83	3.15
6	1.00	3.76	3.15	4.67	4.23
7	1.34	4.79	3.96	5.64	4.93
8	0.81	3.93	3.76	4.20	4.52
9	3.81				
Mangolds, plant number: thousands per acre					
1	18.9	19.7	19.1	18.0	17.7
2	23.6	20.8	20.5	19.5	20.7
4	21.8	(a) 21.8* (b) 21.1*	20.3	19.7	20.2
5	21.6	21.3	21.9	20.7	21.5
6	20.5	21.5	20.7	20.2	21.0
7	20.9	21.8	21.0	20.4	21.3
8	19.0	20.5	21.5	21.4	21.6
9	24.0				

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

58/A/4.2

Strip	Cross Dressing				
	O	N	A	AC	C
Sugar beet, roots (washed): tons per acre					
1	9.04	13.41	13.47	14.26	10.84
2	6.85	12.69*	12.62	13.65	12.47
4	2.08	(b) 11.37*	10.43	14.31	12.75
5	2.77	8.76	9.29	10.76	9.84
6	1.89	9.95	10.32	13.65	11.83
7	2.43	10.30	10.60	12.64	10.81
8	1.89	7.41	7.56	11.24	9.22
9	8.39				
Sugar beet, tops: tons per acre					
1	6.64	13.14	16.61	17.00	15.29
2	6.20	14.85*	14.36	18.76	13.48
4	1.81	(b) 12.02*	6.50	14.70	11.92
5	1.61	10.11	7.82	15.88	10.11
6	1.66	10.60	6.55	15.09	10.70
7	1.91	13.24	9.62	17.05	11.14
8	1.86	9.67	7.57	15.24	11.87
9	7.43				
Sugar beet, plant number: thousands per acre					
1	23.7	22.7	23.4	22.8	22.9
2	24.3	22.8*	23.5	24.4	24.3
4	22.3	(b) 24.0*	24.5	23.6	24.9
5	23.0	23.7	23.5	22.2	23.9
6	22.7	24.3	24.9	24.8	25.2
7	22.3	24.3	23.9	23.3	23.3
8	22.4	23.0	24.4	25.0	25.0
9	22.6				
Sugar beet, sugar percentage					
1	17.9	17.2	17.0	17.0	16.8
2	17.7	17.0*	16.6	16.4	17.0
4	18.0	(b) 17.4*	18.4	17.4	17.6
5	17.7	16.9	17.8	16.5	17.1
6	17.4	17.2	18.2	17.0	17.4
7	17.8	17.6	18.3	16.9	17.5
8	17.4	17.3	18.0	17.2	17.3
9	17.9				

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

58/A/5

HAY - THE PARK GRASS PLOTS 1958

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

Cultivations, etc.: Mineral fertilizers applied: Dec 23, 1957.
 Nitrogenous fertilizers applied: 1st dressing - May 1, 1958;
 2nd dressing - May 15. Cut twice: July 7 and Dec 22 - 30.

Note: The 2nd crop was cut under very unfavourable conditions and there was some soil contamination, particularly on plots 1L, 2U, 2L, 3U, 3L, 4-1U, 4-1L.

Summary of Results

Yield of hay: cwt per acre

Plot	Not limed			Limed		
	1st crop	2nd crop	Total	1st crop	2nd crop	Total
1	14.0	22.1	36.1	19.8	28.5	48.3
2	13.7	24.1	37.8	16.3	31.0	47.3
3	11.2	19.8	31.0	15.9	19.8	35.7
4-1	20.2	23.4	43.6	19.4	25.9	45.3
4-2	24.5	20.1	44.6	28.3	20.8	49.1
5-1	10.9	18.6	29.5			
5-2	22.5	21.8	44.3			
6	28.2	26.5	54.7			
7	28.3	25.0	53.3	38.3	20.1	58.4
8	22.0	25.2	47.2	18.8	19.6	38.4
9	35.8	25.1	60.9	45.0	26.2	71.2
10	30.6	22.0	52.6	33.8	20.4	54.2
11-1	36.8	40.5	77.3	43.6	38.5	82.1
11-2	39.8	45.5	85.3	50.5	42.1	92.6
12	14.5	19.9	34.4			
13	28.5	34.5	63.0	30.6	30.1	60.7
14	46.2	31.3	78.0	45.2	37.8	83.0
15	23.9	15.2	39.1	36.6	25.4	62.0
16	33.8	31.5	65.3	45.6	51.0	96.6
17	23.7	25.2	48.9	25.8	33.6	59.4*
18	24.4	31.2	55.6	30.8*	17.6*	48.4*
				34.5 ⁺	22.1 ⁺	56.6 ⁺
19	30.1	32.9	63.0	33.9*	33.5*	67.4*
				31.4 ⁺	37.9 ⁺	69.3 ⁺
20	39.0	33.8	72.8	43.1*	32.1*	75.2*
				33.4 ⁺	36.2 ⁺	69.6 ⁺

* Heavy liming. ⁺Light liming.

Note: The second crop was carted green; hay yields were estimated from the dry matter.

Mean dry matter % as weighed: 1st crop 87.8; 2nd crop 18.6

58/A/6.1

BARLEY 1958 AND MULTIPLE CROPPING × FK 1957 and 1958 -

HOOSFIELD EXHAUSTION LAND

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

On the western halves - plots 2, 4, 6, 8, 10 - the land fallowed in 1957 was sown to barley in 1958, the remaining 90 links, cropped in 1957, was bare fallowed in 1958.

In 1957, on the eastern half of the field, a modified scheme of cropping was introduced to evaluate manurial residues under 6 different crops in 1957 and again on fresh land in 1958.

The original strips 1, 3, 5, 7, 9 were divided into 12 cross strips of 5 main plots, each main plot being divided into 4 sub plots. In 1957 alternate cross strips were cropped, the remaining cross strips being fallowed, serving as headlands. These uncropped headlands carried the test crops in 1958.

Area of each sub plot:

1957: 0.0035 acres.

1958: 0.0032 acres.

Treatments.

Crops: Potatoes, sugar beet, kale, spring wheat, barley, swedes.

Fertilizer treatments to plots, combinations of:-

Superphosphate; None; 0.25 (P_1); 0.5 (P_2); 1.0 (P_4) cwt P_2O_5 per acre, for all crops.

Sulphate of potash: None; 0.15 (K_1); 0.3 (K_2); 0.6 (K_4) cwt K_2O per acre, for wheat, barley and swedes.

Sulphate of potash: None; 0.3 (K_2); 0.6 (K_4); 1.2 (K_8) cwt K_2O per acre for potatoes, sugar beet and kale.

The above combinations of treatments vary according to the original manurial treatments on wheat and potatoes.

Basal dressing:

Rates of N per acre, as sulphate of ammonia:

Potatoes 1.0

Sugar beet 1.0

Kale 0.6 in seedbed, followed later by two top-dressings each of 0.6 as 'Nitro-Chalk'.

Spring wheat 0.6

Barley 0.5

Swedes 0.6 in 1957

0.4 in 1958

58/A/6.2

Cultivations, etc.:

Western half 1958.

Cropped section. Barley. Ploughed: Dec 31, 1957. Seed drilled at $2\frac{3}{4}$ bushels per acre: Apr 12, 1958. Sulphate of ammonia applied at $2\frac{1}{2}$ cwt per acre: Apr 17. Sprayed with CMPP at 6 pints in 40 gallons per acre: May 28. Combine harvested: Sept 7. Variety: Plumage Archer.

Fallow section. Ploughed: Dec 31, 1957 and June 16, 1958.

Eastern half.

1957. Ploughed: Sept 26, 1956.

Potatoes: Fertilizers applied, potatoes hand planted: Apr 29, 1957. Earthed up: July 6. Sprayed with copper fungicide at 5 lb in 40 gallons per acre: Aug 3 and Aug 21. Harvested: Sept 30. Variety: Majestic.

Sugar beet: Fertilizers applied: Apr 4. Seed drilled at 12 lb per acre: Apr 15. Sprayed with miscible DDT at 3 pints in 20 gallons per acre: May 29. Singled: June 19. Sprayed with demeton methyl at 12 fluid oz in 80 gallons per acre: July 9. Harvested: Nov 7. Variety: Klein E.

Kale: Seedbed N and PK applied: Apr 4. Seed drilled at 6 lb per acre: Apr 27. Thinned: June 28. Nitrogen top-dressings applied: July 2 and Sept 13. Harvested: Dec 2. Variety: Thousand Head.

Spring wheat: Fertilizers applied: Mar 19. Seed drilled at $3\frac{1}{2}$ bushels per acre: Mar 21. Harvested: Aug 19. Variety: Koga II.

Barley: Fertilizers applied: Mar 18. Seed drilled at $2\frac{3}{4}$ bushels per acre: Mar 21. Harvested: Aug 1. Variety: Plumage Archer.

Swedes: Fertilizers applied: Apr 17. Seed drilled at 6 lb per acre: Apr 27. Singled: June 21. Harvested: Nov 15. Variety: Wilhelmsburger.

1958. Ploughed: Dec 31, 1957. All varieties as in 1957.

Potatoes: Fertilizers applied: Apr 23, 1958. Potatoes hand planted: Apr 25. Earthed up: July 8. Sprayed 3 times with copper fungicide, 5 lb in 40 gallons per acre: July 12, and 3 lb and 1 pint spreader in 40 gallons per acre: Aug 6 and 16. Harvested: Sept 9.

Sugar beet: Fertilizers applied, seed drilled at 19 lb per acre: Apr 14. Singled: June 6. Sprayed with demeton methyl at 12 fluid oz in 40 gallons per acre: July 7. Harvested: Nov 18.

Kale: Seedbed N and PK applied: Apr 14. Seed drilled at 3 lb per acre: Apr 15. Thinned: June 10. Nitrogen top dressings applied: July 5 and Aug 27. Harvested: Dec 3.

Spring wheat: Fertilizers applied: Apr 11. Seed drilled at $3\frac{1}{4}$ bushels per acre: Apr 12. Harvested: Sept 1.

Barley: Fertilizers applied: Apr 11. Seed drilled at $2\frac{3}{4}$ bushels per acre: Apr 12. Harvested: Aug 13.

Swedes: Fertilizers applied, seed drilled at 5 lb per acre: May 15. Singled: June 10. Harvested: Oct 5.

58/A/6.3

Summary of Results

Barley

Manuring to potatoes 1876-1901*	Yield (at 85% dry matter): cwt per acre	
	Grain	Straw
2 Unmanured after dung 1876-81	10.4	12.3
4 Dung	27.1	24.1
6 Nitrate of soda	11.5	12.8
8 Nitrate of soda and complete minerals	22.4	21.8
10 Complete minerals	23.6	26.2
Mean dry matter % as threshed	74.6	80.7

*For certain changes see history.

Multiple Cropping 1957

58/A/6.4

Strip	Treatment 1957	Potatoes	Roots	Sugar beet		Kale
		Total tubers: tons per acre	(washed): tons/acre	Total Sugar: cwt/acre	Tops: tons/acre	Total yield: tons per acre
1	P -	4.7	8.3	25.9	14.5	17.3
	P ¹ K ₂	7.9	6.8	20.8	12.4	16.5
	P ¹ K ₄	11.5	9.9	30.7	16.3	19.8
	P ¹ K ₈	10.9	8.3	26.3	12.4	17.4
3	P -	9.9	9.0	28.7	12.0	17.1
	P ¹ K ₄	12.8	11.0	34.2	14.5	18.2
	P ¹ K ₈	14.1	11.1	36.6	13.8	18.3
	-K ₈	8.8	9.4	29.7	11.2	15.9
5	-K ₈	5.0	6.1	18.3	10.0	13.2
	P ₁ K ₈	11.4	8.6	27.6	12.0	15.8
	P ₂ K ₈	11.8	9.1	28.7	12.6	17.4
	P ₄ K ₈	12.7	9.6	29.4	14.9	19.2
7	P -	10.0	9.5	31.2	12.6	18.0
	P ¹ K ₂	11.4	9.6	30.5	11.4	18.4
	P ¹ K ₄	14.0	9.8	30.6	12.8	18.4
	P ¹ K ₈	14.1	9.0	27.9	11.0	20.9
9	-K ₈	9.3	9.0	29.6	9.6	15.2
	P ₁ K ₈	9.6	11.0	36.0	11.8	16.5
	P ₂ K ₈	11.4	9.1	29.0	10.6	17.6
	P ₄ K ₈	12.9	9.9	32.5	12.0	17.7

Strip	Treatment 1957	Barley		Wheat		Swedes	
		Grain cwt per acre	Straw cwt per acre*	Grain cwt per acre	Straw cwt per acre*	Roots tons per acre	Tops tons per acre
1	P -	26.7	22.4	25.6	36.0	10.7	2.6
	P ¹ K ₁	22.7	19.6	21.4	32.4	11.9	2.5
	P ¹ K ₂	22.2	21.3	28.8	43.8	11.8	2.2
	P ¹ K ₄	30.2	27.0	23.6	33.7	11.5	2.4
3	-K ₄	29.1	23.7	24.1	30.5	11.1	2.1
	P ₁ K ₄	28.3	26.1	25.2	35.3	12.1	2.2
	P ₂ K ₄	28.9	23.2	24.6	34.0	14.0	2.7
	P ₄ K ₄	27.7	22.2	23.9	30.7	13.2	2.5
5	-K ₄	20.4	19.7	19.3	23.0	6.9	1.0
	P ₁ K ₄	22.1	19.7	20.3	26.3	8.4	1.4
	P ₂ K ₄	22.8	22.4	21.2	29.6	11.1	1.8
	P ₄ K ₄	26.2	21.1	23.2	33.0	12.2	1.8
7	P -	29.3	25.0	22.5	31.2	12.4	2.3
	P ¹ K ₁	27.5	22.9	24.4	32.9	12.7	2.2
	P ¹ K ₂	28.9	25.3	24.7	35.2	12.9	2.5
	P ¹ K ₄	28.4	23.1	20.5	28.8	12.9	2.2
9	-K ₄	27.2	23.0	21.2	27.3	10.4	1.8
	P ₁ K ₄	25.1	22.0	24.1	32.4	11.6	2.0
	P ₂ K ₄	26.4	25.0	23.8	31.9	11.8	2.2
	P ₄ K ₄	26.0	22.9	22.6	30.8	12.2	2.0
Mean D.M.	82.4	71.8	81.0	81.0	*At 85% dry matter		

Multiple Cropping 1958

58/A/6.5

Strip	Treatment 1958	Potatoes	Roots	Sugar beet		Kale
		Total tubers: tons per acre	(washed): tons/acre	Total Sugar: cwt/acre	Tops: tons/acre	Total yield: tons per acre
1	P -	8.8	16.4	51.8	16.2	23.1
	P ⁺ K	9.7	18.2	58.6	14.8	21.1
	P ⁺ K ₂	12.1	19.7	63.2	14.6	22.6
	P ⁺ K ₄ ₈	13.9	20.3	64.2	14.8	19.1
3	P -	11.0	19.8	64.6	16.1	22.4
	P ⁺ K	13.7	21.3	68.9	15.9	25.7
	P ⁺ K ₈	14.4	22.5	72.1	15.9	28.0
	-K ₈	10.8	18.8	60.8	13.7	22.4
5	-K ₈	5.2	13.5	42.8	14.2	16.3
	P ₁ K ₈	11.6	18.2	57.5	15.6	22.7
	P ₂ K ₈	13.6	18.8	61.4	15.3	22.8
	P ₄ K ₈	13.3	19.0	61.8	15.4	21.0
7	P -	12.1	20.2	66.7	12.7	24.2
	P ⁺ K	13.8	19.3	62.8	14.0	23.3
	P ⁺ K ₂	14.9	19.9	65.2	13.1	23.0
	P ⁺ K ₄ ₈	15.2	17.9	58.7	12.8	24.6
9	-K ₈	7.4	18.4	60.8	12.2	23.1
	P ₁ K ₈	11.0	17.1	56.0	12.0	23.5
	P ₂ K ₈	11.0	17.2	55.5	10.6	24.9
	P ₄ K ₈	13.2	19.9	63.1	13.2	25.2

Strip	Treatment 1958	Barley		Wheat		Swedes	
		Grain cwt per acre	Straw* tons per acre	Grain cwt per acre	Straw* tons per acre	Roots tons per acre	Tops tons per acre
1	P -	26.4	37.5	27.1	43.6	19.4	3.8
	P ⁺ K ₁	26.8	40.2	26.7	44.3	21.9	4.3
	P ⁺ K ₂	26.5	38.6	26.8	46.1	20.9	4.4
	P ⁺ K ₄ ₄	26.5	39.8	27.8	50.9	20.6	4.1
3	-K ₄	23.1	37.2	28.2	49.6	23.2	4.2
	P ₁ K ₄	29.7	37.5	29.1	55.0	22.7	4.5
	P ₂ K ₄	32.6	42.0	31.9	55.8	25.6	4.3
	P ₄ K ₄	29.5	39.9	29.3	54.5	24.8	5.0
5	-K ₄	12.1	26.6	18.7	28.4	10.1	2.5
	P ₁ K ₄	20.2	33.5	24.2	41.6	19.8	4.5
	P ₂ K ₄	24.6	37.2	27.4	48.6	20.8	4.8
	P ₄ K ₄	29.4	39.6	29.1	51.2	23.4	4.7
7	P -	27.0	39.5	25.0	45.0	24.9	4.0
	P ⁺ K ₁	26.3	42.7	25.9	49.3	25.3	4.4
	P ⁺ K ₂	28.6	39.2	27.2	49.4	24.8	4.3
	P ⁺ K ₄ ₄	28.3	41.3	27.0	50.1	25.0	4.2
9	-K ₄	24.0	38.4	23.7	46.6	20.6	4.0
	P ₁ K ₄	25.8	38.1	24.5	42.4	21.5	3.3
	P ₂ K ₄	27.5	39.3	24.7	45.7	20.5	4.2
	P ₄ K ₄	29.4	38.1	25.5	48.1	23.6	4.1
Mean D.M. %		80.2	77.1	77.6	61.0	*At 85% dry matter	

58/47

CLOVER - ROTHAMSTED GARDEN 1958

The 105th year

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

Cultivations, etc.: Muriate of potash applied: Nov 26, 1957.
Resowed all blank patches: May 2, 1958. Cut 3 times: July 9, Aug 30, Nov 7.

Summary of Results

Dry matter: cwt per acre

Muriate of potash: cwt per acre	1st	Cuts 2nd	3rd	Total
None	37.8	6.1	2.0	45.9
2	56.1	8.2	3.1	67.4

58/A/8

WHEAT - WOBURN STACKYARD 1958

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

On account of poor development, particularly of the winter sown crops, it was decided to plough out the whole area of this experiment on May 28, 1958.

Cultivations, etc.: Ploughed: Nov 20, 1956, Apr 16, and July 29, 1957. Ground chalk applied: Aug 8. Winter sown wheat and barley drilled: Nov 19. Spring sown wheat and barley drilled: Mar 21, 1958. Varieties: Winter sown wheat - Squarehead's Master 13/4; spring sown wheat - Peko; winter sown barley - Pioneer; spring sown barley - Plumage Archer.

BARLEY - WOBURN STACKYARD 1958

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

On account of poor development, particularly of the winter sown crops, it was decided to plough out the whole area of this experiment on May 27, 1958.

Cultivations, etc.: Ploughed: Nov 21, 1956, Apr 17, and July 30, 1957. Ground chalk applied: Aug 8. Winter sown wheat and barley drilled: Nov 19. Spring sown wheat and barley drilled: Mar 21, 1958. Varieties: Winter sown wheat - Squarehead's Master 13/4; spring sown wheat - Peko; winter sown barley - Pioneer; spring sown barley - Plumage Archer.