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RESEARCH

Yields of the Field Experiments 1967

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Classical Experiments

Rothamsted Research

Rothamsted Research (1968) *Classical Experiments* ; Yields Of The Field Experiments 1967, pp 13 - 38 - DOI: <https://doi.org/10.23637/ERADOC-1-157>

67/A/1.1

WHEAT - BROADBALK 1967

(BK)

The 124th year

For history, treatments etc. see 'Details' 1962.

Cultivations, etc.:

Cropped sections: Section IA, sprayed with aminotriazole at 4 lb and ammonium thiocyanate at 3.7 lb in 40 gals:
Sept 16, 1966. Ground chalk applied: Sept 21. Ploughed:
Oct 12. Dung applied and ploughed in: Oct 14. Autumn
fertilisers applied: Nov 2. Rotary cultivated, seed drilled
at 185 lb: Nov 3. Spring fertilisers applied: Apr 19, 1967.
Second dressing of nitrate of soda applied to plot 16:
Apr 27. All sections except Va sprayed with ioxynil/mecoprop
(Actril C at 6 pints in 20 gals): May 1. Combine harvested:
Aug 31. Variety: Squarehead's Master 13/4 (Rothamsted
seed from Broadbalk field).
Fallow section II: Ploughed: Oct 12, 1966. Rotary cultivated:
Nov 3. Ploughed: Mar 29 and July 5, 1967.

Broadbalk Wilderness: Cultivations, etc.:

Ungrazed meadow (north): Shrubs grubbed out: Oct 22 -
Dec 5, 1966.
Grazed meadow (centre): Grazed by sheep: Apr 10 - 18, 1967,
May 15 - 24, June 19 - July 3, July 24 - Aug 4, Aug 30 -
Sept 11, Oct 3 - Oct 10, Nov 4 - Nov 8. Grass topped:
Apr 19, May 24, July 3, Aug 4, Sept 11.

67/A/1.2

SUMMARY OF RESULTS

GRAIN

Section Years after fallow	IB	III	IV	VA	VB	IA	Mean
	1	2	3	4	9	16	
2A	29.8	17.2	20.6	17.6	15.1	18.8	19.8
2B	33.6	19.6	21.0	17.8	18.0	16.4	21.3
3	20.7	9.8	7.4	10.3	7.9	7.5	10.4
5	20.4	9.0	9.3	12.1	9.2	7.5	11.0
6	20.8	13.2	7.6	12.2	11.0	14.1	12.4
7	22.4	21.6	16.2	12.2	14.9	20.2	18.2
8	27.4	31.6	26.6	15.8	24.3	26.4	26.5
9	21.3	16.3	13.7	14.7	13.0	13.9	15.5
10	18.0	21.7	17.4	14.7	18.0	7.6	17.7
11	23.7	19.1	15.8	10.1	17.5	19.0	17.6
12	23.9	19.8	14.0	10.5	17.3	20.4	17.4
13	26.2	16.2	11.3	9.1	14.4	16.0	15.2
14	30.1	19.3	11.1	15.4	17.9	21.0	18.1
15	20.2	12.0	3.8	9.0	11.2	9.4	10.3
16	31.7	28.9	21.5	24.0	27.1	20.1	25.9
17	16.4	7.5	4.4	9.4	6.3	4.9	7.8
18	19.2	16.2	15.1	10.5	19.9	13.5	15.9
19	21.9	12.1	7.8	12.1	12.6	13.4	12.5
20	16.8					10.7	14.8

Mean D.M. %: 83.7

NOTE: The yields above are calculated (as in all experiments in the 'Results') from the weight of 'first' grain delivered by the combine harvester, adjusted only for moisture content. On certain sub plots in 1967, samples were separated into wheat, weed seeds and rubbish. Results:-

% WEED SEEDS PLUS RUBBISH

Section	Plot no.				
	2	5	7	9	18
IA	0.9	1.0	0.3	0.2	0.7
IB	0.5	0.7	0.5	0.2	0.4
VA	3.7	18.2	3.4	5.2	12.3
VB	1.7	2.3	1.8	0.3	2.5

67/A/1.3							
Section Years after fallow	STRAW						Mean
	IB	III	IV	VA	VB	IA	
	1	2	3	4	9	16	
2A	55.2	29.2	34.5	40.0	41.0	32.5	37.3
2B	60.7	34.9	35.7	42.9	40.5	34.3	40.4
3	24.2	11.1	7.6	12.4	9.7	11.1	12.0
5	29.0	9.8	9.5	16.6	11.4	11.0	13.6
6	32.9	17.3	10.8	25.2	17.1	22.0	19.0
7	38.7	37.1	29.1	37.6	35.0	35.8	34.9
8	44.7	48.5	38.3	40.1	44.1	42.0	43.2
9	34.1	26.8	21.5	31.8	25.1	27.0	26.8
10	19.6	27.9	22.4	23.7	27.4	14.9	23.8
11	31.7	27.9	20.3	21.0	28.8	28.9	25.7
12	33.8	28.4	18.7	22.8	27.9	28.3	25.8
13	45.2	30.3	18.1	28.5	33.4	26.7	29.0
14	42.5	29.0	18.2	23.9	25.5	30.0	27.0
15	31.6	16.8	9.3	23.8	18.1	24.9	18.4
16	49.7	44.4	32.9	42.1	47.8	33.2	41.4
17	22.0	9.3	4.9	18.0	11.3	6.3	11.0
18	33.1	23.8	28.3	31.5	35.4	23.6	28.7
19	31.7	17.1	13.1	27.1	17.7	20.0	19.6
20	21.8					19.2	21.0

Mean D.M. %: 86.5

STATION	WATER						WATER
	ST	ST	ST	ST	ST	ST	
1	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2	1.00	1.00	1.00	1.00	1.00	1.00	1.00
3	1.00	1.00	1.00	1.00	1.00	1.00	1.00
4	1.00	1.00	1.00	1.00	1.00	1.00	1.00
5	1.00	1.00	1.00	1.00	1.00	1.00	1.00
6	1.00	1.00	1.00	1.00	1.00	1.00	1.00
7	1.00	1.00	1.00	1.00	1.00	1.00	1.00
8	1.00	1.00	1.00	1.00	1.00	1.00	1.00
9	1.00	1.00	1.00	1.00	1.00	1.00	1.00
10	1.00	1.00	1.00	1.00	1.00	1.00	1.00
11	1.00	1.00	1.00	1.00	1.00	1.00	1.00
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	1.00	1.00	1.00	1.00	1.00	1.00	1.00
14	1.00	1.00	1.00	1.00	1.00	1.00	1.00
15	1.00	1.00	1.00	1.00	1.00	1.00	1.00
16	1.00	1.00	1.00	1.00	1.00	1.00	1.00
17	1.00	1.00	1.00	1.00	1.00	1.00	1.00
18	1.00	1.00	1.00	1.00	1.00	1.00	1.00
19	1.00	1.00	1.00	1.00	1.00	1.00	1.00
20	1.00	1.00	1.00	1.00	1.00	1.00	1.00

WATER

67/A/2

PERMANENT BARLEY EXPERIMENT HOOSFIELD, FALLOW 1967 (the 116th year)

(HB)

For history, treatments, etc., see 'Details' 1962 and 'Results' 64/A/2.

No mineral fertilisers or nitrogen were applied. Castor meal was applied at 129 lb N (3 times the normal rate) to the x sub-plots only of series C in order to balance the heavier dressings applied to the y sub-plots in 1964, 1965 and 1966. Dung was applied as usual.

Liming: The quinquennial chalk dressing is to be discontinued. Chalk was therefore applied this year, as follows:-

Plot No.	Ground chalk
1Ax, 2Ax, 3Ax, 4Ax, 5Ax	651 lb
1Ay, 2Ay, 3Ay, 4Ay, 5Ay	1952 lb
1C, 2C, 3C, 4C	813 lb

Corrective liming was also carried out, as follows:-

Plot No.	Ground chalk
1N, 1C, 4C, 4A	23 cwt
7-1, 6-1, 6-2, 5A, 2C	46 cwt

Cultivations, etc.: Sprayed with aminotriazole at 4 lb and ammonium thiocyanate at 3.7 lb in 40 gals: Sept 16, 1966. Dung applied, all plots ploughed: Oct 19. Rotary cultivated twice: Mar 31, 1967 and May 19 - June 2. Castor meal applied: June 9. Ground chalk applied: June 23. Deep-tine cultivated: July 3. Rotary cultivated: July 26.

*amendment
1969*

1917/18

REMARKS: BARKLY EXPEDITION, 1917-18. (See page 10)

(12)

For details, see 'List of Animals' and 'List of Plants'.

No other mammals or birds were applied. (See page 10)
Applied at 1917 in 1918 (See page 10)
Applied at 1917 in 1918 (See page 10)
Applied at 1917 in 1918 (See page 10)
Applied at 1917 in 1918 (See page 10)

Applied at 1917 in 1918 (See page 10)
Applied at 1917 in 1918 (See page 10)

1917-18	1917-18
1917-18	1917-18
1917-18	1917-18
1917-18	1917-18
1917-18	1917-18

Applied at 1917 in 1918 (See page 10)

1917-18	1917-18
1917-18	1917-18
1917-18	1917-18
1917-18	1917-18
1917-18	1917-18

Applied at 1917 in 1918 (See page 10)
Applied at 1917 in 1918 (See page 10)
Applied at 1917 in 1918 (See page 10)
Applied at 1917 in 1918 (See page 10)
Applied at 1917 in 1918 (See page 10)

67/A/3

WHEAT AFTER FALLOW - HOOSFIELD 1967

(HWF)

For history, treatments, etc. see 'Details' 1962.

The comparison of two varieties is now discontinued, Cappelle only being sown.

Area of each plot: 0.1238. Area harvested: 0.0368.

Cultivations, etc.:

Cropped plots: Ploughed: Sept 13, 1966. Seed drilled at 180 lb:
Oct 28. Sprayed with ioxynil/mecoprop (Atril C at 6 pints
in 20 gals): May 9, 1967. Combine harvested: Aug 30.
Fallow plots: Ploughed 3 times: Sept 13, 1966, Apr 3 and
July 5, 1967.

SUMMARY OF RESULTS

Plot	B1	B2	B3
No of years of fallow	1	1	3
GRAIN			
	15.9	18.1	22.2
STRAW			
	11.9	12.1	13.4

Mean D.M. %: Grain: 85.2
Straw: 88.6

67/A/4.1

GRASS - AGDELL 1967

(AG)

For history, treatments etc. see 'Details' 1962 and 'Results' 63/A/4, 64/A/4, 65/A/4 and 66/A/4.

Area of each microplot: Plots 1-4 - 0.0180. Plots 5-6 - 0.0162.
Area harvested: Plots 1-4 - 0.0023. Plots 5-6 - 0.0020.

P (as triple superphosphate) was applied in January 1967 to balance withdrawals by grass in 1964 and 1966 to all sub-plots except P0 which continued to receive no P.

K (as muriate of potash) was applied to balance withdrawals by grass in 1964, 1965 and 1966 to all sub-plots except K0 which continued to receive no K. Some of this K was applied in 1966 (see 'Results' 66/A/4). Because the amounts still required were large the 1967 dressings were split to lessen the risk of damaging the grass. Not more than 2.97 cwt K₂O (3.32 cwt on sub-plots 5 and 6) - 10 lb muriate of potash per sub-plot - was applied in January and the balance was applied after the first cut but before ploughing.

Rates in cwt P₂O₅

Plot no.	P0	Sub-plots testing P			Sub-plots testing K			
		P1	P2	P4	K0	K1	K2	K4
1	0	0.75	0.85	0.93	0.80	1.00	0.88	0.91
2	0	0.68	0.75	0.83	0.59	0.86	0.83	0.88
3	0	0.71	0.70	0.89	0.70	0.76	0.84	0.73
4	0	0.57	0.60	0.80	0.73	0.87	0.83	0.86
5	0	0.52	0.60	0.72	0.50	0.72	0.76	0.80
6	0	0.50	0.69	0.76	0.51	0.80	0.70	0.80

Rates in cwt K₂O

Plot no.	P0	Sub-plots testing P			Sub-plots testing K			
		P1	P2	P4	K0	K1	K2	K4
1	5.78	6.66	7.07	6.82	0	4.45	4.62	6.00
2	3.80	5.57	5.80	5.67	0	3.68	4.58	6.16
3	3.57	6.02	5.54	6.24	0	4.32	4.78	5.38
4	2.90	4.46	4.43	5.19	0	4.00	4.64	5.72
5	1.54	4.50	4.83	5.24	0	3.29	3.95	5.40
6	0.25	4.62	5.10	5.02	0	3.72	3.59	5.05

67/A/4.2

Basal dressing: 'Nitro-Chalk' applied at 0.8 cwt N in March.

Cultivations, etc.:-

Grass: P and first dressing of K applied: 18 Jan, 1967. Cut once for silage: 2 June, 1968. Second dressing of K applied: 7 June. Plots ploughed: 14 June. Rotary cultivated: 5 July, 21 July, 8 Aug, 24 Aug. Resown with Timothy: 7 Sept.

Fallow: Ploughed: 31 Oct, 1966.

67/A/4.3

SUMMARY OF RESULTS

DRY MATTER

		Plot						
P	K	5	6	3	4	1	2	Mean
1ST AND ONLY CUT								
0	4	13.7	7.9	30.2	17.0	37.0	27.1	22.1
1	4	50.4	47.8	48.6	47.0	45.2	46.4	47.6
2	4	55.8	45.4	42.4	39.3	39.0	53.6	45.9
4	4	46.9	44.9	48.8	48.2	42.9	40.4	45.3
4	0	41.7	23.9	24.1	37.8	26.2	25.5	29.9
4	1	57.6	44.3	38.4	47.3	41.7	48.1	46.2
4	2	53.0	43.4	36.8	44.7	45.4	49.0	45.4
4	4	53.6	46.2	38.8	37.3	46.6	48.9	45.2
Mean		46.6	38.0	38.5	39.8	40.5	42.4	41.0

Mean D.M. %: 17.9

67/A/5.1

BARNFIELD 1967

(BN)

For history, treatments, etc., see 'Details' 1962 and 'Results' 62/A/5.

Spring beans were grown over the whole experiment. The manures were applied as usual to strips, but castor bean meal, sulphate of ammonia and nitrate of soda were not applied.

Cultivations, etc.: Dung and mineral fertilisers applied:
Jan 4, 1967. Ploughed: Feb 8 - 16. Seed drilled at
200 lb: Mar 23. Sprayed with simazine at 1 lb in 32 gals:
Mar 23. Sprayed with demeton-s-methyl (Metasystox at
12 fluid oz in 32 gals): June 13. Sides of plots sprayed
with demeton-s-methyl (Metasystox at 12 fluid oz in 32 gals):
July 7. Combine harvested: Sept 8. Variety: Maris Bead.

NOTE: The crop on the strips without dung was stunted and some leaves were blackened, the crop on the dunged strips grew normally. Samples taken in June showed there were no differences in depth of drilling between the strips. It is thought that there was an interaction between simazine and soil organic matter.

67/A/5.2

SUMMARY OF RESULTS

GRAIN

Strip

	1	2	4	5	6	7	8	Mean
Series								
O	34.2	36.6	11.9	10.0	8.9	10.8	9.7	17.5
N	35.1	36.9	12.7	10.9	9.9	8.9	6.7	17.3
A	32.5	38.2	7.9	8.5	8.3	12.2	2.3	15.7
AC	35.2	39.4	17.3	11.0	14.0	14.0	6.5	19.6
C	32.8	39.6	18.0	11.5	17.6	17.9	6.5	20.5
Mean	34.0	38.1	13.6	10.4	11.7	12.8	6.3	18.1

Plot 9: 11.9

General mean: 18.1

Mean D.M. %: 78.4

67/A/6.1

HAY - THE PARK GRASS PLOTS 1967

(PG)

For history, treatments etc. see 'Details' 1962 and 'Results' 65/A/6.

Ground chalk was applied to sub-plots as follows (tons CaCO_3):-

Plot	Sub-plot	
	b	c
1	-	1.25
4-2	-	2.25
9	-	1.75
10	-	2.00
11-1	2.5	2.00
11-2	1.5	2.00
18-1	-	2.00

Cultivations, etc.: Mineral fertilisers and fish meal applied: Jan 12, 1967. Ground chalk applied: Jan 24. Nitrogenous fertilisers applied: 1st dressing - Apr 5, 2nd dressing - Apr 18. Cut twice: June 12, Oct 18.

SUMMARY OF RESULTS

DRY MATTER

Plot No	1st cut				Mean	2nd cut				Mean	Total of 2 cuts				Mean
	a	b	c	d		a	b	c	d		a	b	c	d	
1	15.0	7.2	11.2	8.2	10.4	13.3	10.9	2.4	3.2	7.5	28.3	18.1	13.6	11.4	17.9
2	12.0	13.9	9.3	7.4	10.7	14.3	14.3	14.2	14.5	14.3	26.3	28.2	23.6	21.9	25.0
3	13.2	15.2	8.7	10.4	11.9	13.8	15.1	14.7	15.5	14.8	27.0	30.3	23.3	25.9	25.6
4-1	15.8	14.6	19.0	19.3	17.2	14.4	13.8	18.7	19.1	16.5	30.2	28.3	37.7	38.4	33.6
4-2	35.0	35.4	33.3	26.0	32.4	9.8	8.7	5.4	11.8	8.9	44.8	44.1	38.7	37.8	41.4
7	43.5	38.4	25.6	26.0	33.4	22.8	21.8	16.7	15.8	19.3	66.2	60.1	42.3	41.7	52.6
8	19.6	21.3	24.6	21.5	21.8	17.8	15.8	19.1	17.8	17.6	37.4	37.1	43.7	39.3	39.4
9	57.0	50.6	39.1	37.7	46.1	22.4	20.3	8.8	10.3	15.5	79.4	70.9	47.9	48.0	61.6
10	37.9	36.3	27.7	27.2	32.3	10.5	8.5	3.5	7.5	7.5	48.4	44.8	31.2	34.7	39.8
11-1	53.7	55.4	56.0	44.6	52.5	20.3	14.3	8.7	20.5	15.9	74.0	69.7	64.8	65.1	68.4
11-2	54.8	55.9	59.5	44.0	53.6	25.3	29.3	11.0	17.5	20.8	80.2	85.2	70.5	61.5	74.3
12	12.2	11.8	11.8	11.8	12.0	19.9	17.5	17.5	17.5	18.7	32.0	29.4	29.4	29.4	30.7
13	35.7	37.5	43.6	41.3	39.5	35.5	30.5	27.5	23.6	29.3	71.2	68.0	71.0	64.9	68.8
14	44.5	40.8	39.0	38.5	40.7	19.7	22.8	23.6	22.3	22.1	64.3	63.5	62.6	60.8	62.8
15	36.1	20.2	20.2	20.2	28.1	26.7	15.8	15.8	15.8	21.3	62.7	36.0	36.0	36.0	49.4
16	37.9	43.0	36.9	32.3	37.5	22.9	24.6	21.5	21.6	22.7	60.8	67.7	58.4	53.9	60.2
17	15.8	21.4	19.8	15.6	18.2	14.5	11.4	20.1	16.9	15.7	30.3	32.8	39.9	32.5	33.9
18-1		16.8	16.7	16.7	16.7		7.7	5.7	5.7	6.7		24.5	22.4	22.4	23.4
18-2					21.4					15.8					37.2
18-3	23.5	19.1			21.3	11.8	11.1			11.4	35.3	30.2			32.7
19-1					23.2					20.2					43.4
19-2					28.6					19.5					48.1
19-3					25.2					21.7					46.9
20-1					46.4					21.3					67.8
20-2					40.0					22.8					62.9
20-3					34.3					23.7					58.0
Mean D.M. %:	1st cut: 25.0					2nd cut: 25.7					Total of 2 cuts: 25.4				

67/A/6.2

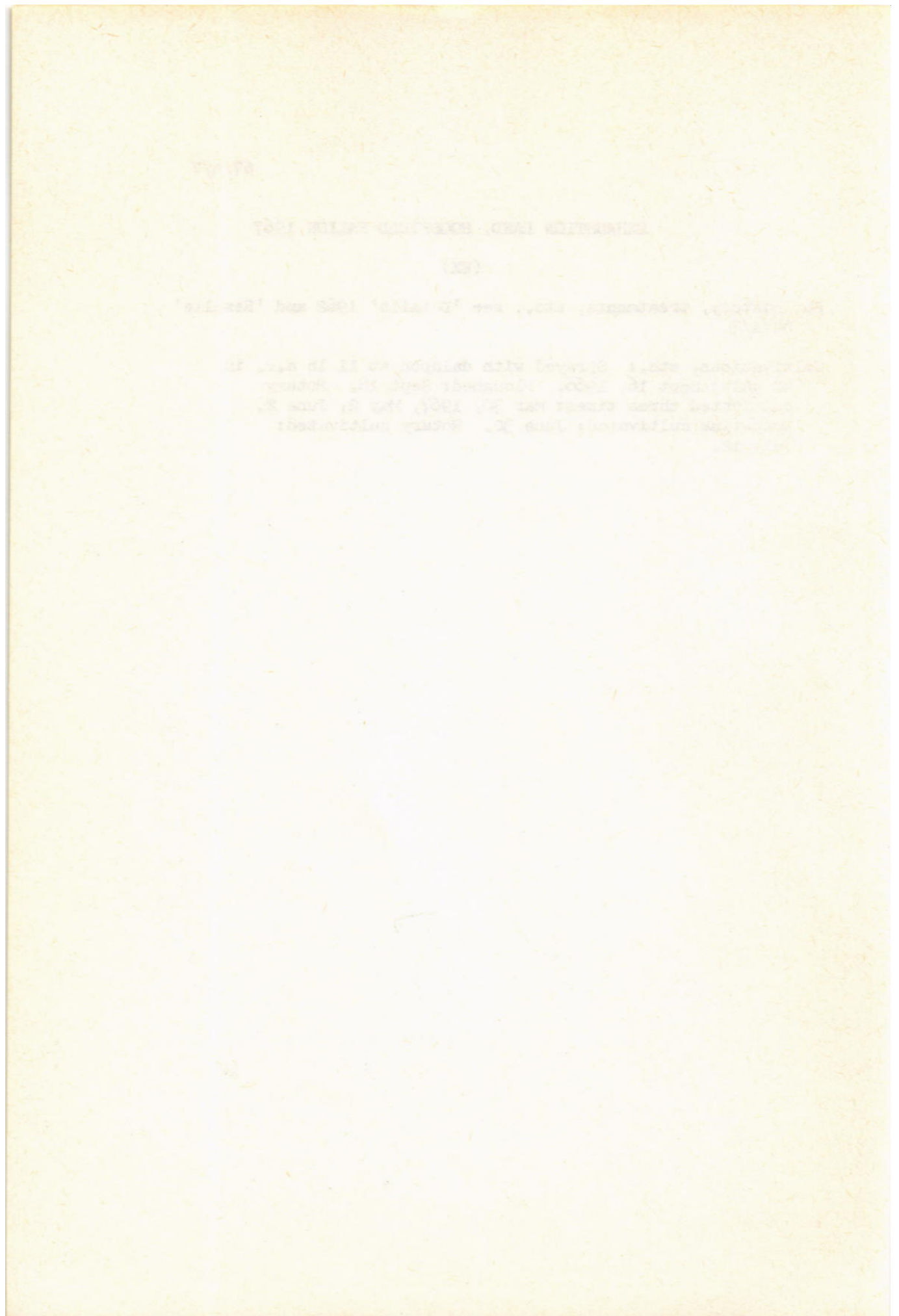
67/A/7

EXHAUSTION LAND, HOOSFIELD FALLOW 1967

(EX)

For history, treatments, etc., see 'Details' 1962 and 'Results' 64/A/7.

Cultivations, etc.: Sprayed with dalapon at 11 lb a.e. in 40 gals: Sept 16, 1966. Ploughed: Sept 18. Rotary cultivated three times: Mar 30, 1967, May 2, June 2. Deep-tine cultivated: June 30. Rotary cultivated: July 12.



67/A/8.1

CLOVER - ROTHAMSTED GARDEN

(EGC)

Revised 1967, the 114th year

For history etc., see 'Details' 1962.

Basal applications: 1 ton ground chalk in 2 equal dressings, 1.2 cwt K₂O as muriate of potash.

Corrective potash: 4.2 cwt K₂O as muriate of potash applied in 2 dressings to the half plot which has not previously received K.

Test of nitrogen: The plot was divided at right angles to the earlier O v K split for a test of O (N₀) v 1.0 (N₁) cwt N as 'Nitro-Chalk' in the seedbed and after each cut except the last.

Variety: S123.

Cultivations, etc.: Ground chalk applied at 10 cwt, 5/7 of corrective potash applied, plots dug by hand, ground chalk applied at 10 cwt, 2/7 of corrective potash applied: Mar 7, 1967. Seed sown at 35 lb, basal potash and 'Nitro-Chalk' applied: Apr 4. Irrigated 0.5 ins by hand: June 14. Cut three times: July 20, Aug 24, Oct 24. 'Nitro-Chalk' applied after first two cuts.

67/A/8.2

SUMMARY OF RESULTS

DRY MATTER

NO	N1	Mean
1ST CUT		
11.8	12.5	12.2
2ND CUT		
16.5	19.5	18.0
3RD CUT		
9.4	10.2	9.8
TOTAL OF 3 CUTS		
37.7	42.2	40.0
Mean D.M. %:		
1st cut:	22.7	
2nd cut:	13.7	
3rd cut:	17.9	
Total of 3 cuts:	18.1	

67/A/9.1

SAXMUNDHAM

ROTATION I 1967

(SA)

For history, treatments, rotations, etc., see Rothamsted Report for 1964, pp. 228 - 232 and 'Results' 66/A/10. For previous years' results see 'Results' 64/A/10, 65/A/10, 66/A/10.

The plots receiving FYM (excluding beans) received also 'Nitro-Chalk' at 0.5 cwt N (N1).

As large losses of nitrate were measured in the drainage water in early May, a test of extra N was made on the discard areas of the barley plots. There was a marked response, and the barley was therefore top-dressed on June 15 with 'Nitro-Chalk' at 0.25 and 0.5 cwt N to the N1 and N2 plots respectively. Sugar beet plots received similar extra dressings on July 18.

Cultivations, etc.:

Sugar beet: FYM applied: Sept 7, 1966. Ploughed: Sept 8.

P,K, bonemeal and 'Nitro-Chalk' applied: Mar 8, 1967.

Seed drilled: Mar 30, 1967. Singled: May 15 - 30. Sprayed with demeton-s-methyl: June 12 and July 7. Additional 'Nitro-Chalk' applied: July 18. Lifted: Sept 28.

Variety: Klein E.

Barley: FYM applied: Oct 27, 1966. Ploughed: Oct - Dec,

P,K and bonemeal applied: Mar 8, 1967. 'Nitro-Chalk'

applied, seed drilled: Mar 22. Sprayed with mecoprop/2,4-D (Methoxone Extra): May 26. Additional 'Nitro-Chalk' applied:

June 15. Combine harvested: Aug 17. Variety: Proctor.

Spring beans: FYM applied: Nov 4, 1966. Ploughed: Nov - Dec.

P,K and bonemeal applied: Oct 13. Seed drilled at 260 lb:

Mar 13, 1967. Sprayed with simazine at 1 lb in 32 gals:

Mar 25. Sprayed with demeton-s-methyl at 3 oz in 37 gals:

June 12. Combine harvested: Aug 24. Variety: Spring Tick.

Winter wheat: FYM applied: Sept 7. Ploughed: Sept 8. P,K

and bonemeal applied: Oct 13. Seed drilled: Oct 14.

'Nitro-Chalk' applied: Mar 15, 1967. Sprayed with mecoprop/2,4-D (Methoxone Extra at 7 pints in 20 gals):

Apr 27. Combine harvested: Aug 17. Variety: Cappelle.

67/A/9.2

SUMMARY OF RESULTS

NEW TREATMENTS

Treatment 1899 - 1965	Treatment from 1966	Roots	SUGAR BEET Sugar % Total sugar	Tops	BARLEY		SPRING BEANS		WINTER WHEAT	
					Grain	Straw	Grain	Straw	Grain	Straw
D	DN1	19.18	17.4	66.6	24.0	14.4	23.2	45.3	47.2	
B	B	5.24	16.9	17.7	11.8	6.8	17.5	14.0	13.7	
N	N2P2	15.78	16.8	53.0	25.0	14.3	18.8	34.3	33.6	
P	N1P1	10.80	17.0	36.8	16.5	6.6	18.6	27.7	27.1	
K	N1P2K	11.95	18.4	43.9	16.2	6.0	17.0	25.9	21.7	
-	N1P2	10.74	17.3	37.1	15.0	6.7	18.8	21.0	20.6	
PK	N1P1K	11.75	17.5	41.2	20.8	11.0	22.8	29.2	20.7	
NK	N2P2K	17.29	17.3	59.9	26.4	14.6	22.9	38.8	32.9	
NP	N2P1	17.74	16.7	59.3	24.8	14.2	16.3	36.8	36.8	
NPK	N2P1K	16.27	17.6	57.2	24.9	12.5	21.7	35.3	33.3	
Mean		13.67	17.3	47.3	20.5	10.7	19.7	30.8	28.8	
Mean D.M. %:					78.0	76.5	80.3	80.1	80.0	

SUMMARY OF RESULTS

OLD TREATMENTS

Plot No	Treatment 1899-1967	SUGAR BEET			BARLEY		SPRING BEANS	WINTER WHEAT		
		Roots	Sugar %	Total sugar	Tops	Grain	Straw	Grain	Straw	
1	D	12.36	17.3	42.7	3.60	16.6	14.1	17.2	35.1	54.3
2	B	5.76	17.7	20.4	2.64	14.2	12.6	21.0	15.9	23.8
3	N	9.12	18.5	33.7	2.52	12.7	11.5	11.5	19.5	34.8
4	P	5.76	17.1	19.7	2.40	11.7	11.0	16.4	15.8	27.0
5	K	4.20	18.3	15.4	1.92	7.7	7.6	8.2	12.9	24.3
6	-	4.68	17.5	16.4	2.04	6.3	6.6	8.0	9.1	19.1
7	PK	6.96	18.1	25.3	2.76	8.1	7.5	15.6	15.3	26.9
8	NK	9.60	18.5	35.4	4.32	12.6	10.9	12.0	22.2	39.1
9	NP	9.36	18.1	33.9	3.36	15.8	14.3	19.2	29.1	44.7
10	NPK	8.52	18.4	31.4	4.32	17.5	15.3	19.3	32.4	54.9
Mean		7.63	17.9	27.4	2.99	12.3	11.2	14.8	20.7	34.9

Mean D.M. %:

69.0 57.9 78.4 77.5 65.9

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No.	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds	No. of birds
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67/A/10.1

SAXMUNDHAM

ROTATION II 1967

(SB)

For history, treatments, rotations, etc. see Rothamsted Report for 1964, pp. 228 - 232 and 'Results' 66/A/11. For previous years' results see 'Results' 64/A/11, 65/A/11, 66/A/11.

Four strips, alternately of sugar beet and white turnips, were cross-drilled on each of the two blocks of the experiment. The plots were manured as in 1966.

Basal manuring: 1.2 cwt N, 2.0 cwt K₂O as 'Nitro-Chalk' and muriate of potash.

Area of each sub-plot: 0.0136. Area harvested: Sugar beet and turnips - 0.0045.

Cultivations, etc.: FYM applied: Sept 27, 1966. First half dressings of triple superphosphate applied: Sept 21. Ploughed: Sept 29 - Oct 27. Second half dressing of triple superphosphate and basal NK applied: Mar 8, 1967. Seed drilled (both crops): Mar 30. Sugar beet: Dusted against flea-beetle: May 13. Singled: May 15 - 30. Sprayed with demeton-s-methyl: June 12 and July 7. Lifted: Sept 28. Variety: Klein E. Turnips: Singled: May 1 - 10. Harvested: July 11. Variety: Green.

67/A/10.2

SUMMARY OF RESULTS

Plot	Treatment 1966 and 67	Roots (washed)	Sugar beet Sugar %	Total sugar	Tops	Turnips Roots
1	PO	8.30	15.7	26.2	5.32	2.22
2	PO	13.50	17.6	47.5	4.73	5.00
3	PO	16.88	17.6	59.4	4.95	6.84
4	D	19.55	17.2	67.2	6.48	7.71
5	DP1	19.51	17.3	67.3	6.56	8.13
6	P1	18.35	17.3	63.4	6.51	7.92
7	P2	18.61	17.3	64.4	5.83	7.88
8	PO	17.44	17.3	60.1	5.90	7.25
Mean		16.52	17.2	56.9	5.79	6.62