ROTHAMSTED RESEARCH

Yields of the Field Experiments 1966

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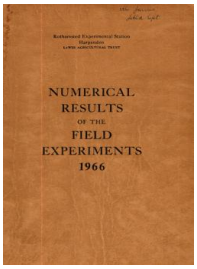

Classical Experiments

Rothamsted Research

Rothamsted Research (1967) *Classical Experiments ;* Yields Of The Field Experiments 1966, pp 11 - 38 **- DOI: https://doi.org/10.23637/ERADOC-1-158**

66/A/1.1

WHEAT - BROADBALK 1966

(BK)

The 123rd year

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

Cultivations, etc.:

CROPPED SECTIONS: Section IA (all plots), plot 20 (sections IB and II) sprayed with aminotriazole at 4 lb and ammonium thiocyanate at 3.7 lb: Oct 4, 1965. Ground chalk applied: Oct 7. Dung applied: Oct 28. Ploughed: Oct 29 - Nov 1. Autumn fertilisers applied: Nov 15. Seed drilled at 187 lb: Jan 7, 1966. Spring fertilisers applied: May 2. Second dressing of nitrate of soda applied to plot 16: May 16. Sprayed with Ioxynil/mecoprop (Actril C at 6 pints in 40 gals), all sections except VA: May 16. Combine harvested: Sept 6. Variety: Squarehead's Master 13/4 (Rothamsted seed from Broadbalk field).

FALLOW SECTION: (IB) Ploughed: Oct 29 - Nov 1, 1965, May 23, 1966, July 14 - 15.

BROADBALK WILDERNESS: Cultivations, etc.:

Ungrazed meadow (north): Shrubs grubbed out: Dec 6 - 10, 1965.

Grazed meadow (centre): Grazed by sheep: May 6 - 12, 1966, May 27 - June 3, June 21 - 29, July 19 - Aug 1, Aug 24 - 30, Sept 23 - 30, Nov 16 - 18.

Grass topped: May 12, June 3, June 29, Aug 1, Aug 30, Sept 30.

https://doi.org/10.23637/ERADOC-1-158

66/A/1.2

SUMMARY OF RESULTS

GRAIN

Section Years after fallow	III 1	IV 2	VA 3	II 4	VB 8	IA 15	Mean
2A	37.3	31.3	26.5	29.9	26.2	24.8	31.0
2B	35.6	30.4	23.3	33.8	26.0	25.0	30.9
3	15.8	9.8	17.1	11.7	10.5	10.3	12.6
5	22.5	10.9	20.8	15.5	14.8	12.8	16.4
6	27.9	18.1	21.0	22.5	20.0	19.6	22.1
7	28.9	28.4	21.3	28.1	30.8	27.9	27.9
8	28.6	32.1	25.4	31.4	30.8	29.9	30.1
9	27.8	25.5	23.8	24.0	21.9	24.5	25.1
10	16.7	19.7	20.1	18.7	15.5	15.4	18.1
11	18.6	27.0	21.0	18.9	20.5	23.7	21.5
12	24.8	28.0	21.7	22.1	22.3	26.1	24.4
13	32.7	25.3	17.3	30.5	30.3	28.7	28.2
14	25.0	25.0	18.1	22.4	25.2	29.5	23.9
15	29.9	15.2	14.9	19.1	14.1	19.5	19.8
16	33.4	31.2	28.6	30.6	33.1	22.0	31.0
17	33.3	27.7	25.2	30.0	27.8	27.7	29.3
18	23.6	13.6	18.0	9.3	13.5	10.1	15.3
19	29.1	17.3	19.5	18.7	18.6	21.9	21.1
20				17.4		18.5	17.7

Mean D.M. %: 82.1

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 1966, samples were separated into wheat, weed seeds and rubbish. Results:-

% WEED SEEDS PLUS RUBBISH

Section	Plot no. 2	5	7	9	18
VA	5	29	8	10	53
VB	2	4	2	2	2

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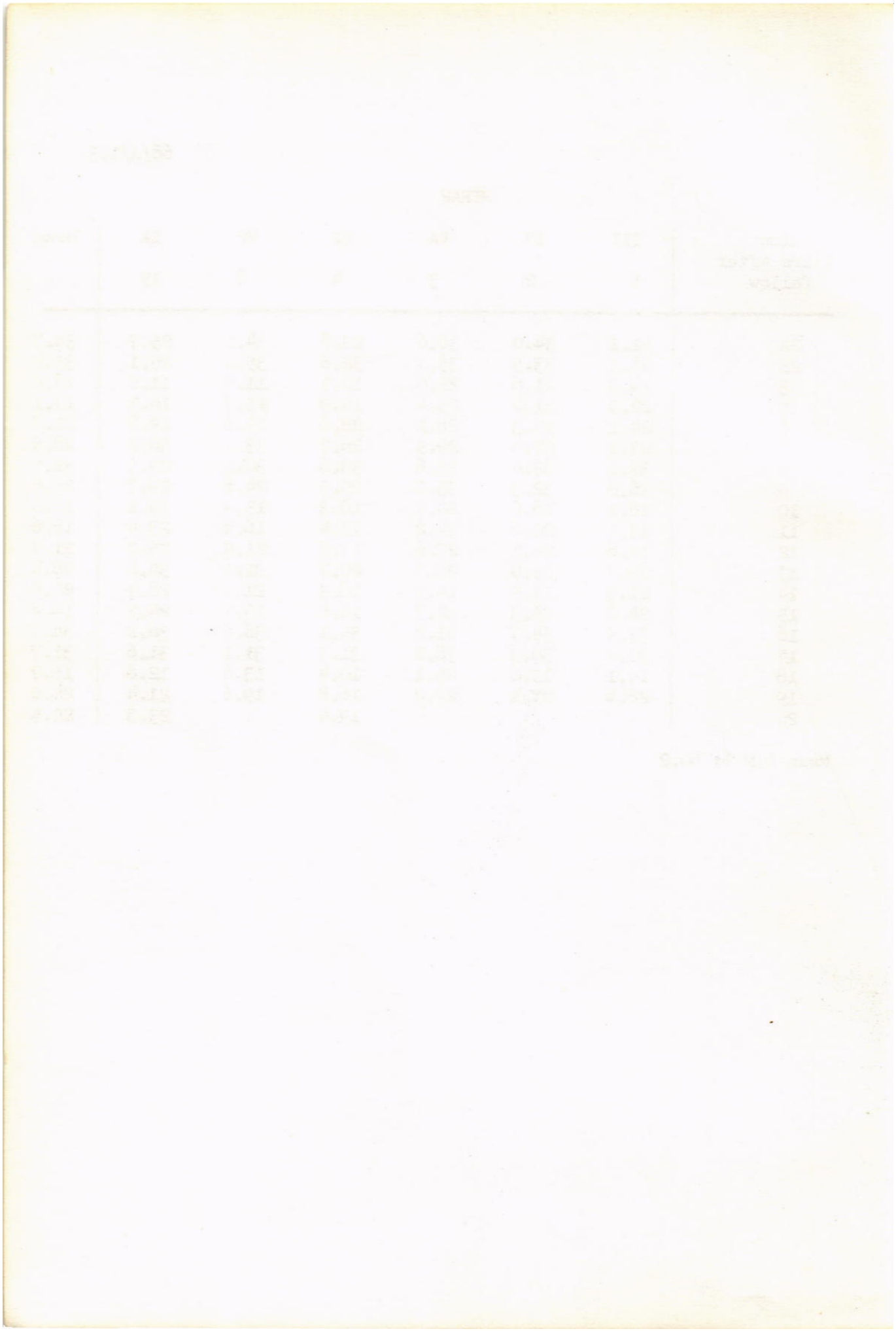
66/A/1.3

STRAW

Section	III	IV	VA	II	VB	IA	Mean
Years after fallow	1	2	3	4	8	15	
2A	41.1	34.0	38.6	29.6	34.1	25.7	34.7
2B	41.5	33.5	35.7	32.8	35.0	25.1	35.2
3	14.3	11.6	22.0	10.5	11.0	11.0	13.0
5	22.9	11.4	25.4	14.9	15.7	14.3	17.1
6	24.1	17.3	28.1	22.6	19.8	19.8	21.8
7	27.1	27.4	29.9	26.7	33.1	30.2	28.2
8	33.6	32.0	35.6	33.6	30.1	29.5	32.8
9	26.8	32.3	33.7	25.9	24.6	29.7	28.6
10	18.1	18.0	20.5	18.3	13.9	19.1	18.0
11	17.1	20.6	24.2	15.4	16.4	23.4	18.6
12	19.8	24.1	27.6	17.8	21.0	25.0	21.7
13	29.7	25.0	25.7	29.7	31.5	30.4	28.4
14	21.3	17.5	24.1	18.3	21.0	28.4	20.4
15	24.8	18.3	22.7	16.8	13.1	24.2	19.8
16	37.9	34.7	41.8	35.1	36.6	36.9	36.7
17	30.4	30.3	38.2	31.7	31.1	31.6	31.7
18	19.1	15.0	25.1	10.4	13.6	12.8	15.7
19	28.4	27.1	29.0	16.8	19.6	21.4	24.0
20				19.4		23.3	20.5

Mean D.M %: 80.2

https://doi.org/10.23637/ERADOC-1-158



66/A/2.1

BARLEY - HOOSFIELD 1966

(HB)

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

Cultivations, etc.: Sprayed with aminotriazole at 4 lb and ammonium thiocyanate at 3.7 lb in 40 gals: Oct 4, 1965. Dung applied, all plots ploughed: Nov 1. Fertilisers applied: Mar 17, 1966. Seed drilled at 155 lb: Mar 18. Sprayed with mecoprop/2,4-D (Methoxone Extra at 6 pints in 40 gals): May 27. Combine harvested: Aug 26.

NOTE: Estimates of eyespot (Cercosporella herpotrichoides) and take-all (Ophiobolus graminis) were made.

https://doi.org/10.23637/ERADOC-1-158

SUMMARY OF RESULTS

Plot	GRAIN PA	GRAIN MB	GRAIN Mean	STRAW PA	STRAW MB	STRAW Mean
1 0	10.2	10.0	10.1	5.1	4.3	4.7
2 0	13.2	10.7	12.0	7.0	3.8	5.4
3 0	6.3	5.5	5.9	2.4	1.6	2.0
4 0	11.9	7.0	9.5	6.3	3.4	4.8
5 0	10.6	8.4	9.5	5.6	4.4	5.0
1 A	16.7	17.7	17.2	11.3	11.6	11.4
2 A	26.7	24.7	25.7	18.0	18.9	18.4
3 A	20.4	26.7	23.6	16.5	20.4	18.5
4 A	29.1	43.4	36.2	19.0	29.6	24.3
5 A	34.3	40.5	37.4	21.9	32.3	27.1
1 AA	15.7	16.5	16.1	11.0	14.2	12.6
2 AA	30.2	34.0	32.1	22.2	29.6	25.9
3 AA	16.8	19.8	18.3	15.3	19.0	17.2
4 AA	27.0	41.0	34.0	16.8	30.0	23.4
1 AAS	22.6	23.6	23.1	20.5	20.7	20.6
2 AAS	30.8	31.2	31.0	24.3	25.5	24.9
3 AAS	21.6	32.2	26.9	18.0	22.7	20.3
4 AAS	32.8	45.1	38.9	22.7	36.8	29.8
1 C	26.4	38.4	32.4	17.9	26.2	22.0
2 C	29.6	40.3	34.9	17.8	24.4	21.1
3 C	25.4	35.9	30.6	15.0	21.8	18.4
4 C	29.4	42.0	35.7	17.4	28.7	23.1
7 - 1	12.2	6.8	9.5	9.4	4.3	6.9
7 - 2	39.8	37.4	38.6	25.2	26.3	25.7
6 - 1	7.0	5.5	6.3	3.9	2.0	3.0
6 - 2	10.1	8.8	9.4	4.5	4.6	4.6
1 N	12.1	11.0	11.5	11.5	12.1	11.8
2 N	18.3	24.2	21.3	10.2	16.7	13.4
Mean	21.0	24.6	22.8	14.2	17.7	15.9
Mean D.M. %:		79.6			66.7	

https://doi.org/10.23637/ERADOC-1-158

66/A/3.1

WHEAT AFTER FALLOW - HOOSFIELD 1966

(HWF)

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

The winter wheat was damaged by wheat bulb fly (Leptohylemia coaretata) and plots A3 and A4 were resown with spring wheat. Plot A1, which was less severely attacked, was left in winter wheat.

Area of each plot: Cappelle (C) - 0.0552, Rothwell Perdix (R) - 0.0690, Kloka (K) - 0.124. Area harvested: 0.0368.

Cultivations, etc.:-

Cropped plots: Ploughed: Oct 14, 1965. Seed drilled at 190 lb: Nov 5. Sections A3 and A4 rotary cultivated and redrilled with Kloka spring wheat at 230 lb: May 2, 1966. Winter wheat sprayed with ioxynil/mecoprop (Actril C at 6 pints in 40 gals): May 16. Spring wheat sprayed with MCPA at 1.5 lb a.e. in 40 gals: June 16. Winter wheat combine harvested: Sept 3. Spring wheat combine harvested: Sept 7.

Fallowed plots: Ploughed 3 times: Oct 14, 1965, May 23, 1966 and July 15.

https://doi.org/10.23637/ERADOC-1-158

66/A/3.2

SUMMARY OF RESULTS

Plot	A3		A4		A1	
No of years of fallow	1		1		3	
Strip	A	B	A	B	A	B
Variety	K	K	K	K	C	R
GRAIN						
	10.0	9.0	10.2	9.6	11.2	13.7
STRAW						
	8.0	6.5	8.1	7.1	4.6	7.0

Mean D.M. %: Grain: 79.7
Straw: 84.8

https://doi.org/10.23637/ERADOC-1-158

GRASS - AGDELL 1966

(AG)

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

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

P and K applied after first cut:-
P was applied in 1966 as triple superphosphate to balance withdrawals by grass in 1965, to all sub plots except (P0) which continues to receive no P. Rates in cwt P_2O_5:-

	Sub plots testing P:-				Sub plots testing K:-			
Plot no.	P0	P1	P2	P4	K0	K1	K2	K4
1	-	1.01	1.13	1.07	0.82	0.85	0.99	1.00
2	-	0.70	0.77	0.81	0.77	0.81	0.88	0.95
3	-	0.79	0.80	0.98	0.79	0.87	0.86	0.97
4	-	0.54	0.65	0.70	0.75	0.85	0.80	0.86
5	-	0.61	0.70	0.79	0.72	0.80	0.73	0.76
6	-	0.65	0.73	0.82	0.77	0.73	0.77	0.73

Withdrawals of K by grass were too great to be balanced by a single dressing without risk of damage to the grass. Consequently a standard dressing of 5 lb muriate of potash per sub plot (1.48 cwt K_2O to plots 1, 2, 3 and 4, 1.66 cwt K_2O to plots 5 and 6) was applied, except to sub plots (K0), which continue to receive no K. The remainder of the dressing required to balance withdrawals will be applied in 1967.

Basal dressing: 'Nitro-Chalk' applied at 0.8 cwt N on Mar 18 and after first 2 cuts. The dressing after the third cut was applied at 1.0 cwt N in error.

Cultivations, etc.:
Grass: P and K fertilisers applied: May 25, 1966. Cut 4 times for silage: May 19, June 29, Aug 12, Oct 12.
Fallow: Ploughed: Jan 13, 1966.

https://doi.org/10.23637/ERADOC-1-158

66/A/4.2

SUMMARY OF RESULTS

DRY MATTER

Plot

P	K	5	6	3	4	1	2	Mean
					1ST CUT			
0	4	16.5	8.8	28.1	26.3	33.6	30.0	23.9
1	4	36.4	36.1	37.3	32.5	38.2	42.4	37.1
2	4	42.4	42.9	37.8	37.7	39.1	40.6	40.1
4	4	37.9	42.3	41.0	37.0	34.9	39.5	38.8
4	0	30.3	27.7	36.3	38.7	36.7	23.8	32.2
4	1	35.2	38.3	36.3	35.9	40.4	36.9	37.2
4	2	40.2	33.8	38.5	44.5	38.8	36.4	38.7
4	4	44.6	40.4	36.9	44.6	37.9	43.3	41.3
Mean		35.5	33.8	36.5	37.2	37.4	36.6	36.2
					2ND CUT			
0	4	19.8	13.7	15.2	19.3	24.6	22.4	19.2
1	4	20.6	20.4	19.4	28.3	27.7	20.9	22.9
2	4	24.0	23.7	24.3	15.4	25.9	19.1	22.0
4	4	24.0	22.4	20.7	26.0	24.0	22.6	23.3
4	0	14.8	17.3	18.5	23.8	23.3	20.8	19.7
4	1	24.9	27.4	21.1	29.6	26.8	28.2	26.3
4	2	24.3	25.3	24.5	17.0	25.5	20.7	22.9
4	4	24.5	25.1	21.1	16.1	27.9	18.9	22.3
Mean		22.1	21.9	20.6	21.9	25.7	21.7	22.3

Mean D.M. %: 1st cut: 18.0
2nd cut: 18.4

https://doi.org/10.23637/ERADOC-1-158

66/A/4.3

DRY MATTER

P	K	Plot 5	6	3	4	1	2	Mean
				3RD CUT				
0	4	3.7	2.8	12.0	9.9	14.4	12.0	9.1
1	4	13.9	16.2	15.4	12.2	21.0	16.2	15.8
2	4	16.2	14.7	14.2	14.0	18.0	14.8	15.3
4	4	14.6	15.6	19.7	14.5	19.4	14.4	16.4
4	0	9.5	7.2	8.8	10.1	12.4	9.2	9.5
4	1	15.6	16.3	16.5	14.2	17.7	14.5	15.8
4	2	19.3	12.9	13.4	13.5	16.6	18.7	15.7
4	4	20.5	16.8	15.7	16.8	16.2	17.5	17.2
Mean		14.2	12.8	14.5	13.1	17.0	14.7	14.4
				4TH CUT				
0	4	3.2	3.7	13.4	10.4	20.0	11.5	10.4
1	4	13.0	10.9	16.9	17.7	13.9	16.7	14.9
2	4	9.5	15.9	13.6	12.4	18.8	17.6	14.6
4	4	15.2	15.5	17.0	18.8	15.2	13.7	15.9
4	0	4.8	3.6	11.2	8.7	16.2	6.9	8.6
4	1	15.4	12.8	15.1	14.5	18.6	14.7	15.2
4	2	8.3	11.7	16.5	16.5	12.3	13.1	13.1
4	4	12.6	14.8	12.6	16.5	13.7	16.7	14.5
Mean		10.2	11.1	14.5	14.4	16.1	13.9	13.4

Mean D.M. %: 3rd cut: 15.0
4th cut: 19.3

https://doi.org/10.23637/ERADOC-1-158

66/A/4.4

DRY MATTER

Plot

P	K	5	6	3	4	1	2	Mean
		TOTAL OF 4 CUTS						
0	4	43.2	29.0	68.7	65.9	92.6	75.9	62.6
1	4	83.9	83.6	89.0	90.7	100.8	96.2	90.7
2	4	92.1	97.2	89.9	79.5	101.8	92.1	92.1
4	4	91.7	95.8	98.4	96.3	93.5	90.2	94.3
4	0	59.4	55.8	74.8	81.3	88.6	60.7	70.1
4	1	91.1	94.8	89.0	94.2	103.5	94.3	94.5
4	2	92.1	83.7	92.9	91.5	93.2	88.9	90.4
4	4	102.2	97.1	86.3	94.0	95.7	96.4	95.3
Mean		82.0	79.6	86.1	86.7	96.2	86.8	86.2

Mean D.M. %: 17.7

https://doi.org/10.23637/ERADOC-1-158

66/A/5

FALLOW - BARNFIELD 1966

(BN)

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

Cultivations, etc.: Dung applied: Dec 29, 1965 - Jan 10, 1966.
Ploughed: Jan 11. Mineral fertilisers applied: May 26 - 31.
Deep-tine cultivated: June 6. Ploughed second time: Aug 16 - 26.

https://doi.org/10.23637/ERADOC-1-158

66/A/6.1

HAY - THE PARK GRASS PLOTS

(PG)

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

Cultivations, etc.: Mineral fertilisers applied: Dec 15, 1965. Nitrogenous fertilisers applied: 1st dressing - Mar 21, 1966, 2nd dressing - Apr 29. Cut twice: June 7, Oct 11.

https://doi.org/10.23637/ERADOC-1-158

SUMMARY OF RESULTS

DRY MATTER

Plot No	1st cut a	b	c	d	Mean	2nd cut a	b	c	d	Mean	Total of 2 cuts a	b	c	d	Total
1	16.7	10.2	12.0	8.3	11.8	15.9	14.3	8.9	11.4	12.6	32.6	24.6	20.9	19.7	24.4
2	17.2	19.5	12.8	10.1	14.9	17.2	18.5	20.3	18.6	18.7	34.4	38.0	33.1	28.7	33.6
3	16.7	19.0	11.4	11.4	14.6	16.7	18.1	17.0	18.6	17.6	33.3	37.1	28.4	30.1	32.2
4-1	22.0	23.0	24.0	24.6	23.4	21.1	26.4	23.6	31.5	25.7	43.1	49.5	47.7	56.0	49.1
4-2	30.9	32.2	32.6	26.0	30.5	21.7	22.0	13.1	16.2	18.3	52.6	54.2	45.8	42.2	48.7
7	42.5	35.9	34.0	33.5	36.5	27.4	27.0	27.7	36.7	29.7	70.0	62.9	61.7	70.2	66.2
8	24.3	24.7	29.1	25.4	25.9	24.4	23.4	38.3	39.7	31.5	48.8	48.2	67.5	65.1	57.4
9	53.6	54.3	46.1	45.0	49.7	28.4	28.0	17.5	26.3	25.1	82.0	82.4	63.6	71.4	74.8
10	35.3	37.9	33.7	27.4	33.6	21.0	18.4	16.7	17.4	18.4	56.4	56.3	50.4	44.8	52.0
11-1	61.1	56.7	57.6	25.9	50.3	40.7	24.9	28.3	33.7	31.9	101.8	81.6	85.9	59.6	82.2
11-2	56.1	61.4	58.0	40.5	54.0	45.2	36.8	30.3	39.3	37.9	101.3	98.2	88.3	79.8	91.9
12	17.3		17.2		17.2	27.1		23.1		25.1	44.4		40.3		42.3
13	32.3	35.7	41.2	35.6	36.2	35.8	38.8	34.9	41.8	37.8	68.1	74.5	76.1	77.4	74.0
14	39.9	42.8	46.5	45.9	43.7	23.4	25.0	27.1	25.9	25.3	63.2	67.8	73.5	71.8	69.1
15	38.3		31.0		34.6	31.5		34.4		32.9	69.8		65.4		67.6
16	37.2	40.2	39.2	36.9	38.4	23.6	26.5	26.1	24.9	25.3	60.7	66.7	65.3	61.9	63.6
17	20.2	24.7	20.0	17.7	20.6	21.7	16.5	26.3	20.0	21.1	41.9	41.2	46.3	37.7	41.8
18-1			25.1	22.7	23.9			16.3	16.9	16.6			41.5	39.5	40.5
18-2					21.4					19.9					41.3
18-3	24.1	24.2			24.1	22.0	21.9			21.9	46.1	46.0			46.0
19-1					33.5					34.1					67.6
19-2					39.5					29.9					69.4
19-3					37.5					31.8					69.3
20-1					48.1					37.7					85.8
20-2					43.6					33.5					77.1
20-3					38.6					28.8					67.3

Mean D.M. %: 1st cut: 24.0 2nd cut: 25.1 Total of 2 cuts: 24.6

66/A/6.2

66/A/7

BARLEY - EXHAUSTION LAND HOOSFIELD 1966

(EX)

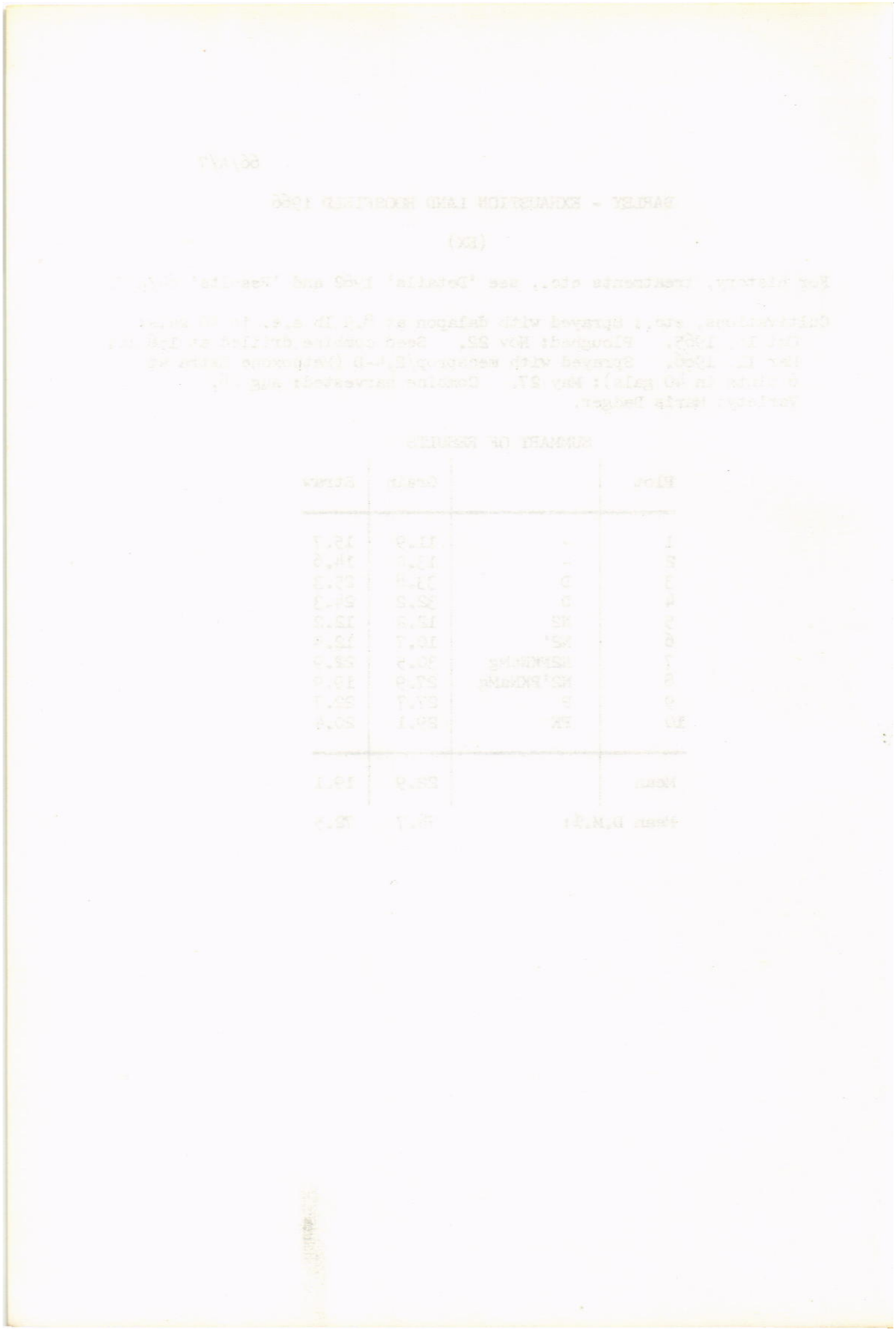
For history, treatments etc., see 'Details' 1962 and 'Results' 64/A/7.

Cultivations, etc.: Sprayed with dalapon at 8.9 lb a.e. in 40 gals: Oct 18, 1965. Ploughed: Nov 22. Seed combine drilled at 156 lb: Mar 11, 1966. Sprayed with mecoprop/2,4-D (Methoxone Extra at 6 pints in 40 gals): May 27. Combine harvested: Aug 26. Variety: Maris Badger.

SUMMARY OF RESULTS

Plot		Grain	Straw
1	-	11.9	15.7
2	-	13.0	14.6
3	D	33.8	25.3
4	D	32.2	24.3
5	N2	12.2	12.2
6	N2'	10.7	12.9
7	N2PKNaMg	30.5	22.9
8	N2'PKNaMg	27.9	19.9
9	P	27.7	22.7
10	PK	29.1	20.4
Mean		22.9	19.1
Mean D.M.%:		78.7	72.5

https://doi.org/10.23637/ERADOC-1-158



66/A/8

CLOVER - ROTHAMSTED GARDEN 1966

(GC)

The 113th year

For history etc., see 'Details' 1962.

Cultivations, etc.: K applied, soil hoed: Mar 22, 1966. Cut, stubble sprayed with paraquat at 2 lb ion in 40 gals: July 28. Plots dug, root stumps carted: Aug 18. Seed drilled at 30 lb: Sept 7. Variety: Red Clover (Dorsetiensis).

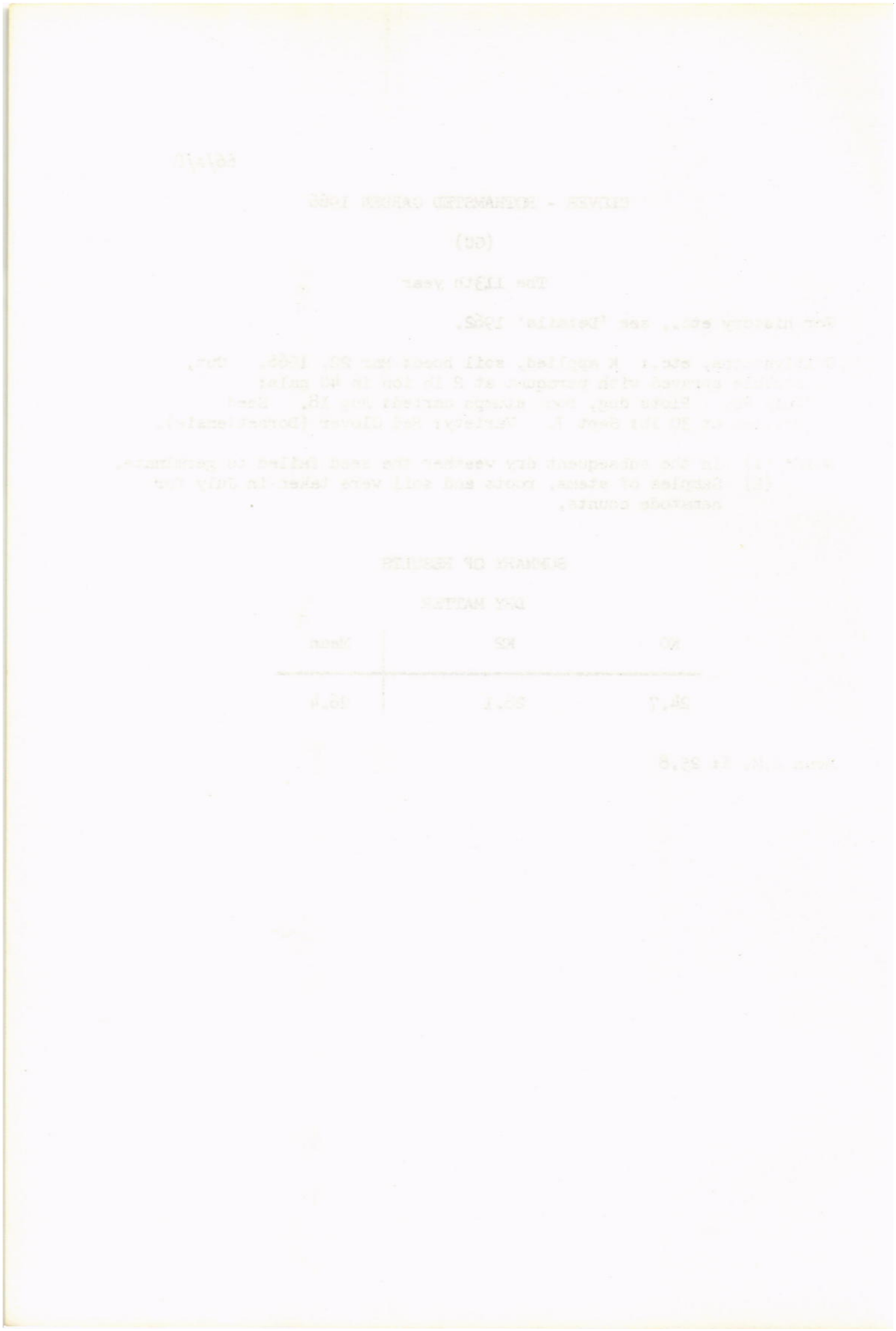
NOTE: (1) In the subsequent dry weather the seed failed to germinate.
(2) Samples of stems, roots and soil were taken in July for nematode counts.

SUMMARY OF RESULTS

DRY MATTER

K0	K2	Mean
24.7	28.1	26.4

Mean D.M. %: 25.8



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66/A/9

FALLOW, SITE OF CONTINUOUS WHEAT AND BARLEY EXPERIMENTS

WOBURN STACKYARD 1966

(WPW and WPB)

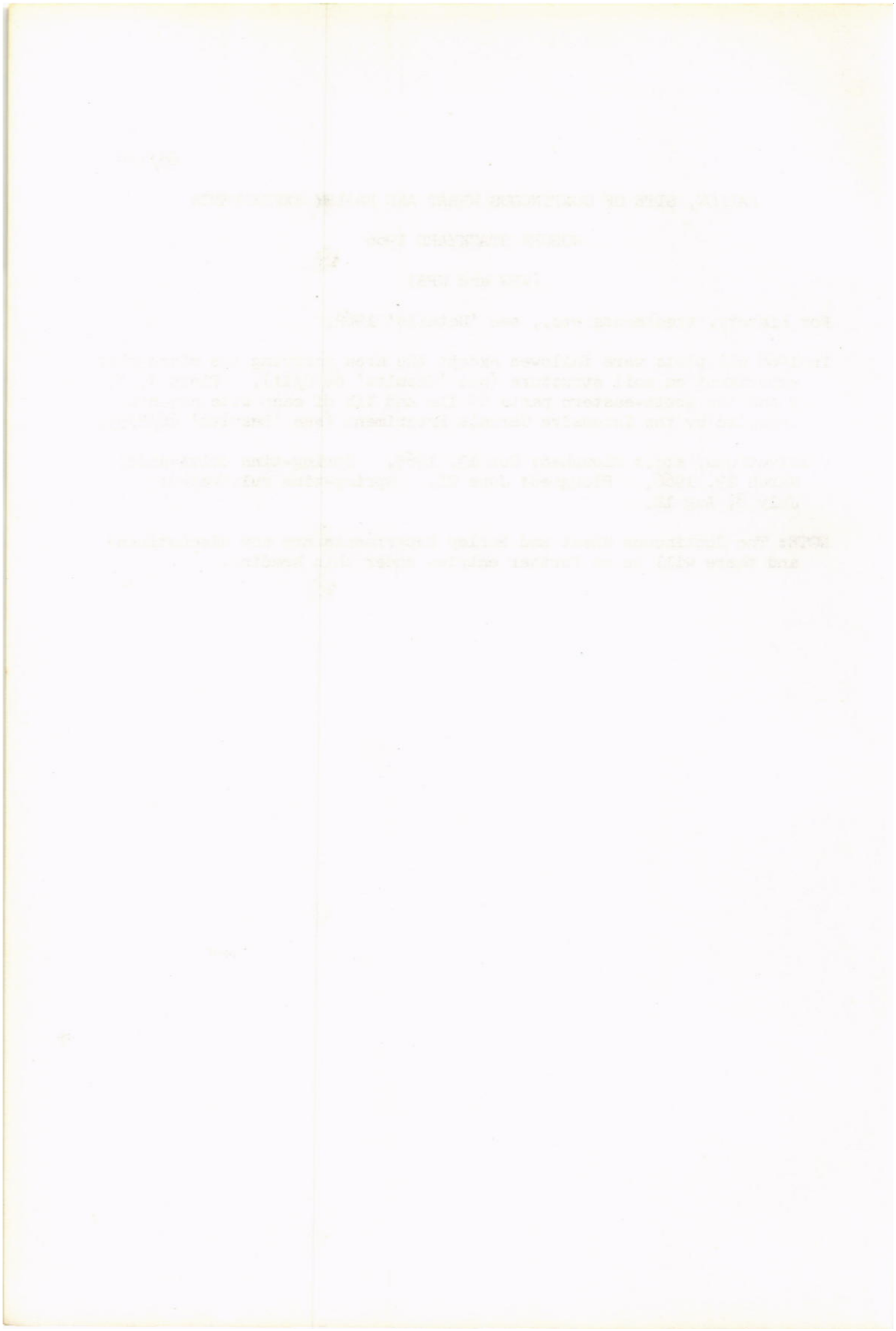
For history, treatments etc., see 'Details' 1962.

In 1966 all plots were fallowed except the area carrying the micro-plot experiment on soil structure (see 'Results' 66/C/11). Plots 7, 8, 9 and the south-eastern parts of 11a and 11b of each site are now occupied by the Intensive Cereals Experiment (see 'Results' 66/B/9).

Cultivations, etc.: Ploughed: Oct 13, 1965. Spring-tine cultivated: March 29, 1966. Ploughed: June 21. Spring-tine cultivated: July 8, Aug 12.

NOTE: The Continuous Wheat and Barley Experiments are now discontinued and there will be no further entries under this heading.

https://doi.org/10.23637/ERADOC-1-158



SAXMUNDHAM

ROTATION I 1966

(SA)

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

The rotation is now sugar beet, barley, beans, winter wheat.

Area of each plot: 0.0546. Area harvested: Sugar beet - 0.0107, barley - 0.0234, spring beans - 0.0421, winter wheat - 0.0275.
Area of each sub-plot: 0.0074. Area harvested: 0.0025.

Treatments: New treatments were applied in 1966 as follows:-

Former plot number	Treatment 1899 - 1965*	Treatment from 1966
1	D	D
2	B	B
3	N	N2P2
4	P	N1P1
5	K	N1P2K
6	-	N1P2
7	PK	N1P1K
8	NK	N2P2K
9	NP	N2P1
10	NPK	N2P1K

* for details see 'Results' 64/A/10.

Symbols (1966) D: 12 tons dung
B: 4 cwt bonemeal
N1, N2: 0.5, 1.0 cwt N to wheat, sugar beet and barley.
0, 0.5 cwt N to beans (all as 'Nitro-Chalk')
P1, P2: 0.4, 0.8 cwt P_2O_5 as superphosphate
K: 1 cwt K_2O as muriate of potash.

A small area at the South end of each plot continues to be treated as in 1899 - 1965, except that (i) N is now applied as 'Nitro-Chalk' (ii) wheat 1966 received treatments as on the main plots. Yields of these sub plots were taken in sugar beet only.

Cultivations, etc.:
Sugar beet: Dung applied and ploughed in: Oct 11, 1965. Ploughed: Oct 12. NPK fertilisers applied: Mar 18, 1966. Bonemeal applied: Mar 22. Seed drilled: Mar 30. Singled: May 23.

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Sprayed with demeton-s-methyl (Metasystox at 17.3 fluid oz in 36 gals): June 15. Lifted: Oct 10. Variety: Klein E.

Barley: Ploughed (excluding dung plot): Oct 27, 1965. Dung applied: Oct 29. Dung ploughed in: Oct 30. Bonemeal applied: Mar 14, 1966. Fertilisers applied: Mar 15. Seed drilled at 195 lb: Mar 17. Sprayed with Dicamba, MCPA, mecoprop and TBA (Cambilene at 4 pints in 20 gals): May 13. Combine harvested: Aug 17. Variety: Proctor.

Spring beans: Dung applied: Oct 29, 1965. Ploughed in: Oct 30. Ploughed: Nov 3. Bonemeal applied: Mar 14, 1966. Fertilisers applied: Mar 15. Seed drilled at 110 lb: Mar 16. Sprayed with simazine at 1.2 lb in 23 gals: Mar 25. Sprayed with demeton-s-methyl (Metasystox at 17.3 fluid oz in 36 gals): June 15. Combine harvested: Aug 24. Variety: Spring Tick.

Winter wheat: Ploughing begun, stopped by rain: Sept 8, 1965. Dung applied and ploughed in (the remainder was not reploughed): Sept 21. PK fertilisers applied: Sept 27. Bonemeal applied, seed drilled: Oct 5. 'Nitro-Chalk' applied: Mar 26, 1966. Sprayed with Dicamba, MCPA, mecoprop and TBA (Cambilene at 4 pints in 20 gals): Apr 29. Combine harvested: Aug 17. Variety: Cappelle.

https://doi.org/10.23637/ERADOC-1-158

SUMMARY OF RESULTS

NEW TREATMENTS

Treatment 1899 - 1965	Treatment from 1966	SUGAR BEET					BARLEY		SPRING BEANS	WINTER WHEAT	
		Roots	Sugar %	Total sugar	Tops	Plant number	Grain	Straw	Grain	Grain	Straw
D	D	13.50	16.5	44.6	5.78	32.6	34.2	20.2	24.3	18.7	13.4
B	B	4.67	16.0	15.0	2.83	22.1	11.2	3.8	7.3	9.9	2.4
N	N2P2	13.71	17.3	47.5	6.86	29.2	29.8	16.6	9.1	27.1	18.5
P	N1P1	9.60	17.2	33.0	3.86	28.1	25.4	15.9	8.4	19.8	14.2
K	N1P2K	7.29	17.1	25.0	3.91	29.4	19.5	12.8	7.5	16.7	12.8
-	N1P2	9.27	17.3	32.1	3.78	30.7	28.1	13.6	8.8	17.8	6.4
PK	N1P1K	10.43	17.6	36.7	4.24	32.8	28.0	21.2	16.8	20.9	14.9
NK	N2P2K	10.10	17.4	35.2	6.44	30.8	32.4	23.6	15.2	28.3	19.9
NP	N2P1	11.34	17.5	39.8	7.35	34.4	31.6	19.4	14.3	28.9	17.3
NPK	N2P1K	10.06	17.7	35.7	6.03	35.4	29.1	15.5	15.1	32.2	24.1
Mean		10.00	17.2	34.5	5.11	30.5	26.9	16.2	12.7	22.0	14.4
Mean D.M.%:							83.5	87.7	83.7	83.0	79.1

66/4/10.3

66/A/10.4

OLD TREATMENTS

Plot no.	Treatment 1899 - 1966	SUGAR BEET Roots	Sugar %	Total sugar	Tops	Plant number
1	D	11.07	16.2	35.9	5.94	29.4
2	B	5.40	16.1	17.4	3.06	26.2
3	N	4.41	16.7	14.7	3.24	23.8
4	P	4.95	16.2	16.1	2.70	29.8
5	K	2.07	16.2	6.7	1.98	26.2
6	-	3.51	16.4	11.5	2.52	35.9
7	PK	7.29	16.9	24.6	3.78	35.9
8	NK	3.69	16.7	12.3	3.42	31.1
9	NP	12.69	16.9	43.0	5.22	30.7
10	NPK	11.16	17.3	38.6	5.58	34.3
Mean		6.63	16.6	22.1	3.75	30.3

https://doi.org/10.23637/ERADOC-1-158

SAXMUNDHAM

ROTATION II 1966

(SE)

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

All plots were planted with potatoes, which were manured as follows:-

Plots 1, 2, 3 and 8:	No P	(P0)
Plot 4:	20 tons dung	(D)
Plot 5:	20 tons dung plus 1.5 cwt P2O5	(DP1)
Plot 6:	1.5 cwt P2O5	(P1)
Plot 7:	3.0 cwt P2O5	(P2)

All P2O5 as triple superphosphate.

Basal manuring: 1.2 cwt N and 1.2 cwt K2O as (16:0:16) and 0.8 cwt K2O as muriate of potash, applied on the flat.

Area of each plot: 0.0545. Area harvested: 0.0043.

Cultivations, etc.: Dung applied: Nov 2, 1965. Ploughed: Nov 3. Fertilisers applied: Mar 15, 1966. Potatoes planted: Mar 31. Sprayed with linuron at 0.67 lb and paraquat at 0.25 lb ion in 16 gals: Apr 29. Lifted: Sept 21. Variety: Pentland Dell.

NOTE: Leaf samples were taken on June 15 for P and K analysis.

https://doi.org/10.23637/ERADOC-1-158

66/A/11.2

SUMMARY OF RESULTS

POTATOES

Plot no.	Treatment 1966	Total tubers
1	PO	7.45
2	PO	14.56
3	PO	16.85
4	D	20.47
5	DP1	20.34
6	P1	18.23
7	P2	18.60
8	PO	16.28
Mean		16.60