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Yields of the Field Experiments 1965

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Classical Experiments

Rothamsted Research

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65/A/1.1

WHEAT - BROADBALK 1965

(BK)

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

Cultivations, etc.:

CROPPED SECTIONS: Ground chalk applied: Sept 9, 1964. Ploughed: Oct 9 - 14. Dung applied: Oct 13. Autumn fertilisers applied: Oct 19. Seed drilled at 180 lb: Oct 26. Spring fertilisers applied: Apr 26, 1965. Second dressing of nitrate of soda applied to plot 16: May 10. Sprayed* with MCPA at 1.13 lb and dicamba at 0.08 lb in $\frac{3}{4}$ gals: May 11. Combine harvested: Sept 21. Variety: Squarehead's Master 13/4 (Rothamsted seed from Broadbalk field).

FALLOW SECTION: (IV) Ploughed: Oct 9 - 14, 1964, Nov 30, July 21, 1965.

BROADBALK WILDERNESS: Cultivations, etc.:

Ungrazed meadow (north): Shrubs grubbed out: Nov 3 - 19, 1964.

Grazed meadow (centre): Grazed by sheep: Apr 26 - May 4, 1965,

May 22 - 28, June 15 - 25, July 19 - 29, Aug 18 - 31,

Oct 4 - Nov 4. Grass topped: May 3, May 28, June 25,

July 29, Sept 1.

* Except Section 5A.

65/A/1.2

SUMMARY OF RESULTS

GRAIN

Section Years after fallow	IV	VA	II	IB	VB	IA	Mean
	1	2	3	4	7	14	
2A	32.7	29.3	27.5	25.9	28.3	24.1	28.8
2B	31.5	26.3	26.6	24.2	26.9	24.9	27.5
3	23.4	13.9	8.2	8.0	7.2	9.7	13.0
5	27.1	20.6	9.3	9.0	10.7	9.7	15.7
6	24.0	14.7	14.7	13.5	13.7	12.7	16.8
7	21.5	21.7	23.1	20.9	18.9	22.2	21.6
8	26.5	24.6	23.1	26.5	22.4	19.7	24.4
9	23.3	21.4	19.2	13.5	18.6	17.7	19.6
10	18.4	22.0	18.3	14.0	14.9	10.7	17.2
11	17.9	25.8	16.5	15.5	17.1	14.7	17.8
12	18.8	21.3	17.0	17.7	14.5	16.5	17.8
13	21.2	21.1	20.0	16.4	17.4	19.3	19.6
14	21.0	20.4	18.8	19.7	17.1	14.5	19.2
15	24.7	15.3	18.3	18.5	22.1	18.7	20.2
16	20.4	22.8	20.5	20.4	21.6	16.8	20.6
17	20.3	13.5	7.9	5.6	8.7	3.7	11.5
18	24.2	15.3	18.5	15.5	23.7	19.6	20.0
19	26.1	22.9	19.1	18.4	19.6	16.9	21.3
20			12.2	17.0		12.4	14.0

Mean D.M. %: 79.3

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 1965 samples were separated into wheat, weed seeds and rubbish. Results:-

% weeds plus rubbish

Plot No

	2	5	7	9	18
Section VA	4	19	9	12	34
Section VB	2	8	3	4	2

65/A/1.3

Section Years after fallow	STRAW						Mean
	IV	VA	II	IB	VB	IA	
	1	2	3	4	7	14	
2A	47.3	41.1	34.3	40.9	35.9	30.9	39.6
2B	49.0	35.3	42.3	38.7	35.6	30.3	41.1
3	29.6	15.5	12.6	9.6	11.4	10.7	16.9
5	39.8	22.7	8.1	15.2	18.8	13.8	21.2
6	43.1	21.3	19.9	19.0	15.6	19.6	25.7
7	37.1	36.2	34.5	32.9	31.1	36.2	34.9
8	44.6	47.6	38.6	33.9	39.8	36.7	40.7
9	31.5	32.9	28.0	23.6	31.4	30.4	29.5
10	26.1	35.3	15.5	14.7	21.9	20.3	21.8
11	24.6	38.3	21.8	21.9	19.8	39.3	25.5
12	34.3	37.4	20.2	18.0	26.5	12.7	26.1
13	37.7	41.2	31.5	27.0	38.0	31.7	34.6
14	38.0	42.3	20.5	27.3	29.9	20.0	30.0
15	36.7	30.5	26.5	27.7	33.4	35.8	31.4
16	46.1	43.2	35.7	32.5	42.4	34.2	39.7
17	22.3	18.3	9.6	8.7	10.8	8.2	14.0
18	40.5	22.8	24.5	22.1	39.2	28.0	30.4
19	36.3	31.9	25.7	25.5	28.5	24.4	29.6
20			14.3	21.3		27.9	19.2

Mean D.M.%: 88.3

TABLE 1

WATER QUALITY - 1960

STATION	TEMP	PH	DO	TOTAL SOLIDS	CHLOROPHYLL	COLOUR
1	18.5	7.8	5.2	120	1.5	10
2	19.0	7.9	5.5	110	1.4	9
3	18.8	7.7	5.1	130	1.6	11
4	19.2	8.0	5.6	100	1.3	8
5	18.9	7.8	5.3	115	1.4	9
6	19.1	7.9	5.4	105	1.3	8
7	18.7	7.7	5.0	125	1.5	10
8	19.3	8.1	5.7	95	1.2	7
9	18.6	7.6	4.9	135	1.7	12
10	19.4	8.2	5.8	90	1.1	6
11	18.4	7.5	4.8	140	1.8	13
12	19.5	8.3	5.9	85	1.0	5
13	18.3	7.4	4.7	145	1.9	14
14	19.6	8.4	6.0	80	0.9	4
15	18.2	7.3	4.6	150	2.0	15
16	19.7	8.5	6.1	75	0.8	3
17	18.1	7.2	4.5	155	2.1	16
18	19.8	8.6	6.2	70	0.7	2
19	18.0	7.1	4.4	160	2.2	17
20	19.9	8.7	6.3	65	0.6	1

WATER QUALITY - 1961

WATER QUALITY - 1962

STATION	TEMP	PH	DO	TOTAL SOLIDS	CHLOROPHYLL	COLOUR
1	18.5	7.8	5.2	120	1.5	10
2	19.0	7.9	5.5	110	1.4	9
3	18.8	7.7	5.1	130	1.6	11
4	19.2	8.0	5.6	100	1.3	8
5	18.9	7.8	5.3	115	1.4	9
6	19.1	7.9	5.4	105	1.3	8
7	18.7	7.7	5.0	125	1.5	10
8	19.3	8.1	5.7	95	1.2	7
9	18.6	7.6	4.9	135	1.7	12
10	19.4	8.2	5.8	90	1.1	6
11	18.4	7.5	4.8	140	1.8	13
12	19.5	8.3	5.9	85	1.0	5
13	18.3	7.4	4.7	145	1.9	14
14	19.6	8.4	6.0	80	0.9	4
15	18.2	7.3	4.6	150	2.0	15
16	19.7	8.5	6.1	75	0.8	3
17	18.1	7.2	4.5	155	2.1	16
18	19.8	8.6	6.2	70	0.7	2
19	18.0	7.1	4.4	160	2.2	17
20	19.9	8.7	6.3	65	0.6	1

65/A/2.1

BARLEY - HOOSFIELD 1965

(HB)

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

The appearance of the crop in early May indicated that plot 4AAS had not received seedbed nitrogen and that plot 4AA had received a double dressing in error. Plot 4AAS was therefore top-dressed with the correct dressing on May 20.

Cultivations, etc.: Quinquennial chalk supplement applied to series A, C and plot 5A: Sept 26, 1964. Dung applied, all plots ploughed: Nov 3. Fertilisers applied, seed drilled at 160 lb: Apr 1, 1965. Sprayed with mecoprop/2,4-D (Methoxone Extra at 6 pints in 34 gals): May 14. Nitrate of soda applied to plot 4AAS: May 20. Combine harvested: Sept 9.

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

Errata to 'Details' 1962, p.12 Hoosfield Barley.

Treatment

Treatment for 3AA should read N' K Na Mg.
Treatment for 4AA should read N' PK Na Mg.

Means 1852 - 1962

Substitute the following values for those printed:

Plot	Grain	Straw
5.0	8.8	10.1
1AA	12.4	
2AA	19.9	
3AA	13.0	
4AA	19.6	
1AAS	15.5	
2AAS	20.6	
3AAS	16.2	
4AAS	21.1	
1N	14.2	
2N	16.5	19.6

65/A/2.2

SUMMARY OF RESULTS

Plot	GRAIN			STRAW		
	PA	MB	Mean	PA	MB	Mean
1 O	9.1	7.4	8.2	6.5	2.9	4.7
2 O	11.6	11.3	11.4	6.8	4.8	5.8
3 O	10.6	8.9	9.8	7.4	6.3	6.9
4 O	14.3	10.5	12.4	9.7	5.2	7.5
5 O	13.9	9.2	11.6	10.0	7.1	8.6
1 A	12.5	14.4	13.5	10.1	9.7	9.9
2 A	23.2	27.7	25.5	17.2	26.1	21.7
3 A	18.9	27.2	23.1	18.4	24.8	21.6
4 A	27.0	38.5	32.8	21.8	33.2	27.5
5 A	31.0	37.5	34.2	31.2	39.9	35.5
1 AA	13.0	12.2	12.6	11.8	12.4	12.1
2 AA	26.6	34.1	30.4	24.5	36.6	30.5
3 AA	16.8	21.9	19.3	19.5	22.6	21.1
4 AA	29.8	35.1	32.4	30.7	52.6	41.6
1 AAS	20.1	18.6	19.3	19.7	17.1	18.1
2 AAS	23.9	30.6	27.2	20.9	28.6	24.8
3 AAS	23.2	32.6	27.9	24.6	33.8	29.2
4 AAS	31.2	35.3	33.3	28.1	40.3	34.2
1 C	22.2	32.7	27.5	18.1	21.5	19.8
2 C	25.5	37.3	31.4	19.6	28.2	23.9
3 C	23.9	36.5	30.2	19.0	27.1	23.0
4 C	29.5	35.3	32.4	24.6	29.3	26.9
7 - 1	16.5	11.5	14.0	11.7	8.6	10.1
7 - 2	36.7	44.9	40.8	38.6	42.8	40.7
6 - 1	9.8	7.2	8.5	6.6	5.0	5.8
6 - 2	12.9	7.7	10.3	7.6	5.6	6.6
1 N	13.3	9.7	11.5	19.2	23.7	21.4
2 N	23.8	29.3	26.5	21.9	28.0	24.9
Mean	20.4	23.8	22.1	18.0	22.3	20.2
Mean D.M. %:		72.8			79.1	

65/A/3

WHEAT AFTER FALLOW - HOOSFIELD 1965

(HWF)

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

Area of each plot: Squarehead's Master (SM) 13/4 - 0.0690.

Cappelle (C) - 0.0552. Area harvested: 0.0368.

Cultivations, etc.:-

Cropped plots: Ploughed: Sept 17, 1964. Seed drilled at
190 lb: Oct 26. Combine harvested: Sept 21.

Fallowed plots: Ploughed 3 times: Sept 17, 1964, July 19, 1965,
Aug 13.

SUMMARY OF RESULTS

Plot No. of years of fallow	B1	B4	B2	Mean
	1	1	3	

GRAIN

SM	13.7	11.5	10.7	11.9
C	14.7	12.4	13.0	13.4
Mean	14.2	11.9	11.8	12.7

STRAW

SM	19.5	16.9	16.3	17.6
C	18.0	16.9	13.3	16.1
Mean	18.8	16.9	14.8	16.8

Mean D.M. %: Grain 68.2
Straw 81.4

65/A/4.1

GRASS - AGDELL 1965

For history, treatments etc., see 'Details' 1962 and 'Results' 64/A/4.1.

Grass and fallow areas:-

Residual effects of old P and K treatments and of those applied in 1964 were tested. No manures were applied except a basal dressing to grass of 0.8 cwt N as 'Nitro-Chalk' for each cut.

Area of each microplot: 0.0180. Area harvested: 0.0023.

Cultivations, etc.:-

Grass: 'Nitro-Chalk' applied: Apr 1, 1965. Cut 3 times for silage: May 19, July 26, Oct 6. 'Nitro-Chalk' applied after first 2 cuts.

Fallow: Ploughed: Oct 19, 1964. Rotary cultivated: June 30, 1965. Chisel ploughed: Aug 6.

SUMMARY OF RESULTS

DRY MATTER

Plot

P	K	5	6	3	4	1	2	Mean
1ST CUT								
0	4	14.3	4.4	34.5	23.3	40.3	34.0	25.1
1	4	33.1	36.6	40.4	28.1	41.0	36.3	35.9
2	4	34.8	41.5	37.0	30.4	42.9	36.3	37.1
4	4	35.3	39.3	40.1	30.9	44.3	39.5	38.2
4	0	36.7	36.2	35.2	34.4	37.4	36.5	36.1
4	1	36.2	35.6	39.9	37.8	33.6	36.9	36.7
4	2	33.0	39.0	36.3	34.2	37.7	36.6	36.1
4	4	34.7	33.7	34.8	37.0	39.7	43.4	37.2
Mean								
		32.3	33.3	37.3	32.0	39.6	37.4	35.3

Mean D.M. %: 14.1

65/A/4.2

DRY MATTER

Plot

P	K	5	6	3	4	1	2	Mean
2ND CUT								
0	4	54.2	39.1	29.2	36.3	41.1	31.0	38.5
1	4	37.4	33.5	33.6	28.0	44.9	39.7	36.2
2	4	31.7	30.7	35.8	28.0	38.8	35.8	33.5
4	4	38.1	35.4	35.0	31.6	44.2	31.6	36.0
4	0	34.5	31.2	26.4	30.9	38.7	28.6	31.7
4	1	34.3	30.3	37.2	28.7	41.2	37.8	34.9
4	2	28.3	24.8	35.6	32.7	32.3	30.2	30.7
4	4	33.1	33.2	40.6	28.8	36.8	33.2	34.3
Mean								
		36.5	32.3	34.2	30.6	39.7	33.5	34.5

3RD CUT

0	4	14.6	13.1	22.1	24.5	27.1	27.1	21.4
1	4	22.7	28.5	29.9	24.5	27.8	22.9	26.1
2	4	28.9	25.6	23.1	26.9	27.2	25.6	26.2
4	4	26.1	27.3	27.1	26.1	28.5	26.4	26.9
4	0	17.6	23.0	25.0	23.6	21.0	22.2	22.1
4	1	25.2	26.2	27.6	29.1	22.3	23.4	25.6
4	2	26.0	26.5	28.4	28.3	26.6	27.1	27.1
4	4	25.4	26.0	27.5	27.6	30.2	27.4	27.4
Mean								
		23.3	24.5	26.4	26.3	26.3	25.2	25.4

Mean D.M. %: 2nd cut: 19.2
3rd cut: 21.0

65/A/4.3

DRY MATTER

Plot

P	K	5	6	3	4	1	2	Mean
TOTAL OF 3 CUTS								
0	4	83.1	56.6	85.8	84.1	108.5	92.1	85.0
1	4	93.2	98.6	103.9	80.6	113.7	98.9	98.2
2	4	95.4	97.8	95.9	85.3	108.9	97.7	96.8
4	4	99.5	102.0	102.2	88.6	117.0	97.5	101.1
4	0	88.8	90.4	86.6	88.9	97.1	87.3	89.8
4	1	95.7	92.1	104.7	95.6	97.1	98.1	97.2
4	2	87.3	90.3	100.3	95.2	96.6	93.9	93.9
4	4	93.2	92.9	102.9	93.4	106.7	104.0	98.9
Mean		92.0	90.1	97.8	89.0	105.7	96.2	95.1

Mean D.M. %: 18.1

65/A/5

FALLOW - BARNFIELD 1965

(BN)

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

The experiment was fallowed. Mineral fertilisers and dung were applied as before 1964, but nitrogen and castor meal were not applied.

Cultivations, etc.: Dung applied, all plots ploughed: Nov 9, 1964. Mineral fertilisers applied: May 14, 1965. Rotary cultivated: May 17. Ploughed second time: July 21 - Aug 4.



65/A/6.1

HAY - THE PARK GRASS PLOTS 1965

(PG)

The 110th year

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

Liming: All plots (excluding 5-1, 5-2, 6, 12, 15, 18-2 and all of plots 19 and 20) are divided into 4 sub-plots each, and ground chalk is applied in such a way as to establish and maintain the following reactions per sub-plot:-

Old scheme	South		North	
	Limed		Unlimed	
Sub-plot	a	b	c	d
ph existing ph		6	5	maximum acidity
Plot 18-1 and 3 are divided into a,b and c,d (a at the Eastern end).				

In 1965 ground chalk was applied to sub-plots as follows (tons CaCO_3):-

Plot	Sub-plot	
	b	c
1	-	2.5
4-2	1.0	4.5
9	2.0	3.5
10	1.0	4.0
11-1	5.0	4.0
11-2	3.0	4.0
13	-	1.0
18-1	-	2.0

Area of each sub-plot:*

Plot	Area harvested	
1	0.048	0.0070
2,3		0.0088
4-1,4-2		0.0093
11-1 and 11-2	0.061	0.0094
7,8,9,10 and 13	0.123	0.0189
14,16 and 17	0.040	0.0057
18	0.081	0.0210

Microplots: Experiments using microplots are now in progress on the following plots:-

- 5-1 and 5-2 (Effects of NPK on old grass) (see 65/22)
- 6 (Effects of N levels on old grass) (see 65/22)

Cultivations, etc.: Dung applied to appropriate plots: Nov 10, 1964.

Mineral fertilisers applied: Nov 27. Ground chalk applied: Jan 6, 1965. Nitrogenous fertilisers applied: 1st dressing: Mar 10, 2nd dressing: Apr 13. Cut twice: June 28 and Dec 3.

* The lengths harvested on sub-plots a, b, c and d varied slightly. The areas given are averages.

SUMMARY OF RESULTS

DRY MATTER

Plot No	1st cut			Mean	2nd cut			Mean	Total of 2 cuts				Total
	a	b	c		a	b	c		a	b	c	d	
1	22.8	17.0	21.9	19.9	10.0	5.1	5.2	7.3	32.8	22.1	27.1	25.2	26.8
2	20.6	22.6	23.4	21.9	6.7	5.9	7.8	6.0	27.3	28.5	31.2	27.3	28.6
3	23.4	21.9	22.1	22.3	5.7	4.9	7.0	7.1	29.1	26.8	29.2	29.0	28.5
4-1	28.0	28.5	29.0	29.5	13.5	10.7	14.3	15.6	41.5	39.2	43.3	48.2	43.1
4-2	34.9	33.9	40.0	36.6	11.6	7.2	7.4	9.7	46.5	41.1	47.5	47.2	45.6
7	44.3	45.0	41.8	41.4	17.7	17.4	21.0	17.4	62.1	62.4	62.8	51.9	59.8
8	31.1	31.4	37.8	34.3	11.1	11.0	16.3	16.5	42.2	42.3	54.1	53.6	48.1
9	51.5	47.8	50.7	51.6	19.5	13.0	6.5	8.4	71.0	60.8	57.2	64.7	63.4
10	38.5	38.2	44.0	40.6	17.8	12.8	5.8	10.7	56.2	51.0	49.8	52.6	52.4
11-1	60.9	55.4	57.4	56.1	23.8	20.3	17.6	29.5	84.8	75.8	75.1	80.0	78.9
11-2	62.3	61.7	61.6	58.9	25.3	24.6	12.5	28.1	87.6	86.3	74.1	78.0	81.5
12	28.7	27.5	27.5	28.1	19.1	13.5	13.5	16.3	47.7	47.7	41.1	41.1	44.4
13	40.2	47.4	47.3	45.2	24.0	28.6	35.1	30.3	64.2	76.0	82.4	76.1	74.7
14	43.4	50.4	46.9	45.9	10.9	11.5	16.1	17.8	54.3	61.9	63.1	60.5	59.9
15	36.7	32.7	32.7	34.7	17.0	14.5	14.5	15.7	53.7	53.7	47.2	47.2	50.4
16	43.3	43.4	44.4	41.9	15.2	16.3	20.1	16.7	58.5	59.7	64.6	53.2	59.0
17	24.2	26.0	29.8	27.6	11.4	12.1	18.7	13.3	35.6	38.1	48.4	43.6	41.4
18-1			19.5	17.4		14.5	14.5	12.8			34.1	28.0	31.0
18-2				27.2									36.9
18-3	28.6	31.6		30.1	10.8	12.1			39.4	43.7			41.5
19-1				44.4									74.5
19-2				42.1									64.7
19-3				44.7									71.3
20-1				46.6									80.5
20-2				44.9									78.8
20-3				42.1									72.4

Mean D.M. %: 1st crop: 25.7 2nd crop: 23.5

65/A/6.2

65/A/7

BARLEY - EXHAUSTION LAND HOOSFIELD 1965

(EX)

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

The crop grew unevenly on the plots with residues of P and FYM, regularly spaced strips of good and poor growth ran diagonally across these plots.

Cultivations, etc.: Ploughed: Nov 2, 1964. Seed combine drilled at 160 lb: Mar 15, 1965. Sprayed with MCPA at 1.13 lb and dicamba at 0.08 lb in 40 gals: May 22. Combine harvested: Sept 1.

NOTE: Estimates were made of the incidence of eyespot (*Cercospora herpotrichoides*) and take-all (*Ophiobolus graminis*).

SUMMARY OF RESULTS

Plot		Grain	Straw
1	-	14.5	14.6
2	-	12.4	12.5
3	D	33.2	25.9
4	D	29.4	22.1
5	N2	12.1	10.0
6	N2'	11.9	11.1
7	N2PKNaMg	29.0	20.2
8	N2'PKNaMg	27.0	19.2
9	P	29.7	19.2
10	PK	26.8	15.5
Mean		22.6	17.0
Mean D.M. %:		77.4	81.7

1971

WATER RESOURCES RESEARCH

1971

For authors, instructions on how to prepare manuscripts, and a list of the

the steps that should be followed in preparing a manuscript, are given in the

instructions for authors, which are printed in the back of the journal. The

instructions for authors are also available in the form of a separate

INSTRUCTIONS FOR AUTHORS

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65/A/8

CLOVER - ROTHAMSTED GARDEN 1965

(GC)

The 112th year

For history etc. see 'Details' 1962.

In 1965 each of the existing half plots was divided for a test of formalin - none (O) v a 38% solution of formaldehyde at 266 gals in 3700 gals (F). Sub-plots not treated with formalin received an equivalent amount of water. All sub-plots were covered with polythene sheeting from Apr 14 to Apr 27.

Cultivations, etc.: Soil loosened with forks, formalin applied: Apr 14, 1965. K applied, seed drilled at 30 lb: May 27.
Cut: Oct 13. Variety: Red Clover (*Dorsetiensis*) - inoculated seed.

NOTE: Dry matter samples were taken for chemical analysis.

SUMMARY OF RESULTS

DRY MATTER

	O	F	Mean
K0	7.9	19.5	13.7
K2	28.3	24.4	26.4
Mean	18.1	22.0	20.0

Mean D.M. %: 18.3

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65/A/9

FALLOW AND MUSTARD, SITES OF CONTINUOUS WHEAT AND BARLEY EXPERIMENTS

WOIBURN STACKYARD 1965

(WFW and WFB)

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

In 1965 all plots were fallowed, except the area carrying the micro-plot experiment on soil structure (see 'Results' 65/C/19). Plots 7, 8, 9 and the south-eastern parts of 11a and 11b of each site, which were sown to mustard as a precaution against wheat bulb fly in preparation for the Intensive Cereals Experiment 1966.

Cultivations, etc.:

All plots (excluding microplot area): Ploughed: Sept 29, 1964.

Chisel ploughed: Dec 16, 1964 and Apr 27, 1965.

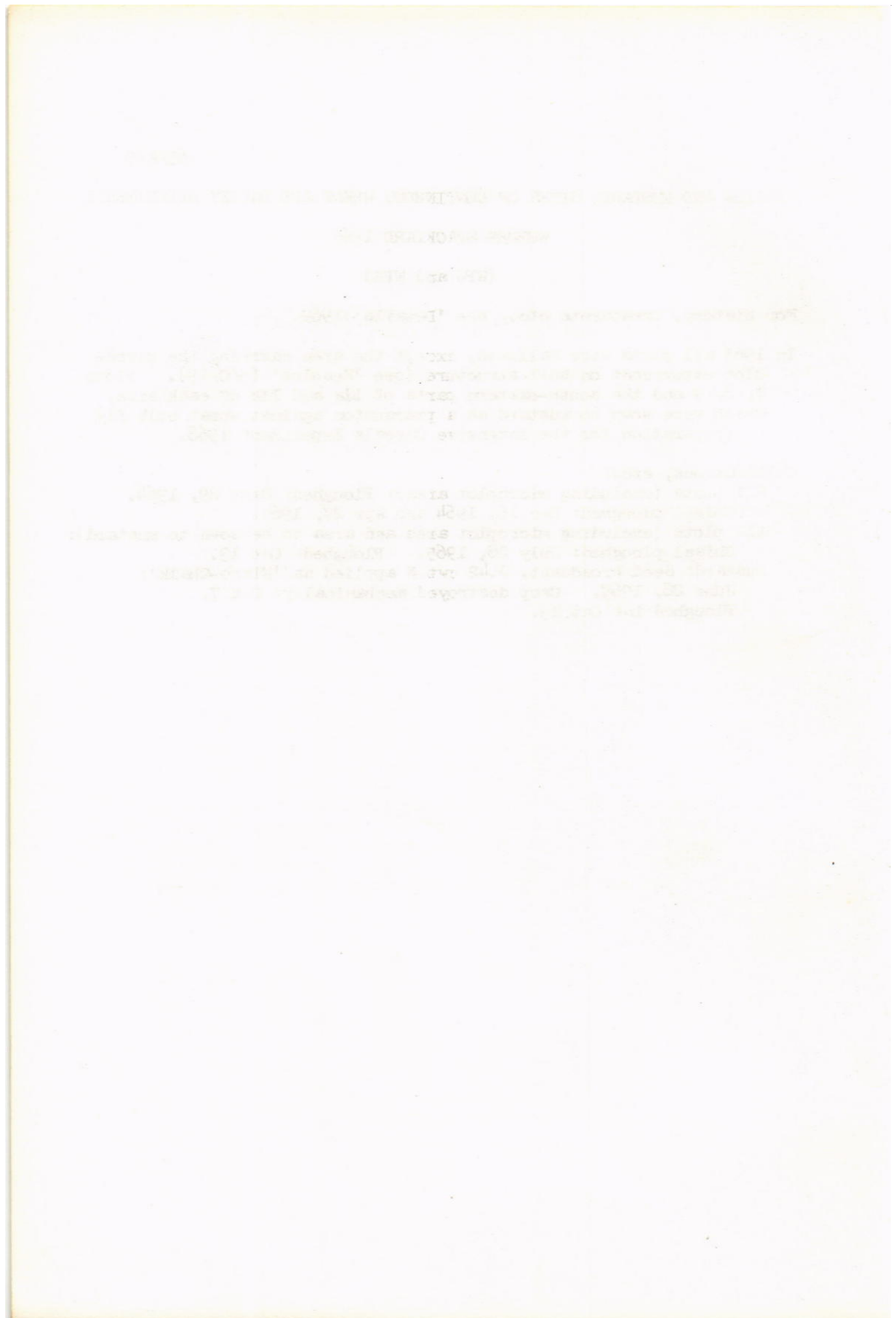
All plots (excluding microplot area and area to be sown to mustard):

Chisel ploughed: July 28, 1965. Ploughed: Oct 13.

Mustard: Seed broadcast, 0.42 cwt N applied as 'Nitro-Chalk':

June 28, 1965. Crop destroyed mechanically: Oct 7.

Ploughed in: Oct 13.



65/A/10.1

SAXMUNDHAM

ROTATION I 1965

(SA)

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

The rotation is now sugar beet, barley, fallow, winter wheat. Manures are applied as hitherto, but the fallow receives dung, bonemeal, P and K but no nitrogen.

Area of each plot: 0.0546. Area harvested: Wheat and barley - 0.0275, sugar beet - 0.0107.

Cultivations, etc.:-

Sugar beet: Dung applied: Sept 21, 1964. Ploughed: Nov 10.

Bonemeal, superphosphate and muriate of potash applied:

Mar 17, 1965. Seed drilled: Apr 7. DDT applied: May 7.

Singled: May 15 - 29. Nitrate of soda applied: May 17.

Lifted: Oct 18. Variety: Klein E.

Barley: Dung applied: Nov 3, 1964. Ploughed: Nov 16. Bonemeal,

superphosphate and muriate of potash applied: Mar 15, 1965.

Seed drilled at 150 lb: Mar 30. Sprayed with hormonal

weedkiller: May 12. Nitrate of soda applied: May 17.

Combine harvested: Aug 31. Variety: Proctor.

Fallow: Dung applied: Sept 22, 1964. Ploughed: Nov 14.

Bonemeal, superphosphate and muriate of potash applied:

Apr 3, 1965. Ploughed 3 times: Apr 5, June 3 and

July 19 - 31.

Winter wheat: Ploughed: July 28 - Aug 20, 1964. Dung applied

and ploughed in: Sept 18. Bonemeal, superphosphate and

muriate of potash applied, seed drilled at 160 lb: Nov 6.

Nitrate of soda applied: Mar 6, 1965. Sprayed with hormonal

weedkiller: May 12. Combine harvested: Aug 31. Variety:

Cappelle.

65/A/10.2

SUMMARY OF RESULTS

Former Treatment plot no. 1965		Sugar beet					Barley		Wheat	
		Roots	Sugar %	Total sugar	Plant Tops	Number	Grain	Straw	Grain	Straw
1	D	13.88	18.4	51.0	9.31	42.3	23.2	10.7	29.4	18.1
2	B	9.96	18.4	36.6	3.20	34.9	9.8	3.0	20.9	11.1
3	N	2.88	17.3	10.0	2.24	23.3	12.4	5.3	24.6	12.7
4	P	7.55	18.8	28.4	2.62	33.7	5.4	1.3	15.9	9.8
5	K	2.42	18.0	8.7	1.25	21.3	3.7	0.7	13.9	9.4
6	O	1.41	16.6	4.7	1.66	21.6	6.4	2.1	18.2	11.8
7	PK	6.79	18.9	25.6	1.91	26.8	5.9	0.6	16.9	10.2
8	NK	0.89	15.8	2.8	1.29	18.2	8.8	2.0	26.5	10.0
9	NP	10.23	18.7	38.2	3.07	29.7	23.6	10.4	24.3	10.5
10	NPK	11.00	18.8	41.4	3.12	30.4	21.2	7.6	24.8	13.2
Mean		6.70	18.0	24.7	2.97	28.2	12.0	4.4	21.5	11.7
Mean D.M. %:							81.3	80.6	78.9	76.8

65/A/11.1

SAXMUNDHAM

ROTATION II 1965

(SB)

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

All plots, including plot 8 (the treatment of which was discontinued after 1952) were sown to barley, which was manured as follows:-

Plots 1, 2, 3, 4 and 8: No P (P0)

Plots 5 and 6: 1.5 cwt P2O5 (P1)

Plot 7: 3.0 cwt P2O5 (P2)

All P2O5 as superphosphate.

Basal manuring: 100 lb N and 200 lb K as 'Nitro-Chalk' and muriate of potash.

Area of each plot: 0.0545. Area harvested: 0.0148.

Cultivations, etc.: Ploughed: Oct 28 - Nov 18, 1964. Fertilisers applied: Mar 30, 1965. Seed drilled at 150 lb: Apr 1.

Sprayed with hormonal weedkiller: May 12. Combine harvested: Aug 31. Variety: Proctor.

65/A/11.2

SUMMARY OF RESULTS

BARLEY, GRAIN

Plot no.	Treatment 1965	
1	P0	15.9
2	P0	31.3
3	P0	34.6
4	P0	34.2
5	P1	34.3
6	P1	34.1
7	P2	33.2
8	P0	31.4
Mean		31.1

Mean D.M. %: 79.9