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Yields of the Field Experiments 1960

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60/W/A/8 Stackyard Woburn - Wheat and Barley and Microplots

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60/A/8.1

WHEAT AND BARLEY, AND BARLEY AND POTATOES MICROPLOTS -
WOBURN STACKYARD 1960

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

59? Strip cropping and microplots 1960: Wheat and barley were sown in strips as in 1949, except that on the south eastern of the 3 blocks of each of the old experiments, the barley strip was replaced by 2 strips, one of potatoes, one of barley, for microplot tests of P and K fertilisers.

Area of each main plot (acres):		Area harvested (acres):
10a - 11b	0.0274	0.0206
Remainder	0.0411	0.0234

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

Treatments (to microplots only). Certain combinations of:- ?
Superphosphate:- None, 0.25 (P_1), 1.0 (P_4) cwt P_2O_5 per acre (barley and potatoes).
Sulphate of potash:- None, 0.15 (K_1), 0.6 (K_4) cwt K_2O per acre (barley).
Sulphate of potash:- None, 0.30 (K_2), 1.2 (K_8) cwt K_2O per acre (potatoes).

Plots 11a and 11b being narrower than the rest were divided into 4 microplots each instead of 16 and carried tests of K only (continuous wheat site) or P only (continuous barley site).

Basal dressings per acre:

To wheat and barley:- 0.9 cwt N as 'Nitro-Chalk'.

To microplots:-

Potatoes: 1.2 cwt N as 'Nitro-Chalk'.

Barley: 0.6 cwt N as 'Nitro-Chalk'.

Cultivations, etc.: Ground chalk applied to whole area at 11 cwt per acre: Sept 10, 1959.

Wheat: Permanent wheat site ploughed: Sept 11.

Permanent barley site ploughed: Sept 15. Seed drilled at 3 bushels per acre: Oct 22, 1959. 'Nitro-Chalk' applied: Mar 21, 1960. Sprayed with DNOC at 2 gallons in 8 gallons per acre: May 3. Combine harvested: Aug 31. Variety: Squarehead's Master 13/4.

Barley: Ploughed 2nd time: Nov 12 - 23, 1959. Seed drilled at $2\frac{3}{4}$ bushels per acre; 'Nitro-Chalk' applied: Mar 21, 1960. Sprayed with TCB/MCPA at 4 pints in 40 gallons per acre: May 23. Combine harvested: Aug 30. Variety: Plumage Archer.

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Microplots.

Potatoes: Ploughed 2nd time: Nov 12 - 23, 1959. Basal N, basal and treatment P and K applied on the flat: Apr 21, 1960.

Potatoes planted by machine: Apr 22. Blanks in rows planted with chitted seed: May 27. Earthed up: June 13. Lifted: Sept 19. Variety: Majestic.

Barley: Basal and treatment P and K applied: Mar 22, 1960.

Basal N applied, seed drilled at $2\frac{3}{4}$ bushels per acre: Mar 23.

Sprayed with TCB/MCPA at 4 pints in 40 gallons per acre: May 23.

Harvested: Aug 10. Variety: Plumage Archer.

Summary of Results

Main plots

Crop in 1960 Crop in old scheme	Wheat		Barley	
	Continuous wheat	Continuous barley	Continuous wheat	Continuous barley

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

Plot 1	12.2	24.9	21.3	17.9
2	9.7	24.2	15.4	16.9
3	20.0	27.4	20.4	16.0
4	15.1	21.9	21.9	19.2
5	15.0	24.0	23.0	19.0
6	20.2	25.9	24.7	23.5
7	20.9	27.3		
8	20.3	27.2		
9	23.7	27.6		
10a	19.3	25.9	19.6	20.4
10b	20.3	24.5	18.7	17.7
11a	25.3	24.9	20.9	21.9
11b	25.7	24.5	22.5	21.8

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

Plot 1	26.4	29.3	18.4	13.5
2	18.6	25.9	12.8	13.3
3	22.9	41.4	15.1	12.4
4	26.9	23.0	18.1	13.3
5	19.2	26.7	17.3	12.9
6	22.8	31.2	17.5	15.6
7	23.5	34.7		
8	20.3	44.2		
9	29.3	47.4		
10a	22.0	34.8	11.2	13.6
10b	26.8	33.4	10.3	11.6
11a	+	+	13.5	14.3
11b	32.4	44.1	15.2	13.3

Mean dry matter % as harvested: Grain 76.6 78.7
Straw 84.5 83.9

+ Not recorded.

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Microplots

Barley

Crop in old scheme	No. sub plots	Continuous wheat			Continuous barley		
		7	8	9	11a*	11b*	11b*
Treatment							
P K							
0 4	4	20.0	18.6	27.0	23.8	24.3	23.0
1 4	2	20.4	18.6	26.3	24.1	26.1	25.8
4 4	2	23.2	18.1	28.4	24.5	26.9	26.9
4 0	4	24.6	19.0	24.2	23.2	24.6	23.5
4 1	2	25.9	18.8	24.6	22.5	26.6	27.4
4 4	2	26.2	18.0	26.4	25.0	26.8	26.9
		Grain (at 85% dry matter): cwt per acre					
		20.0	18.6	27.0	23.8	24.3	23.0
		20.4	18.6	26.3	24.1	26.1	25.8
		23.2	18.1	28.4	24.5	26.9	26.9
		24.6	19.0	24.2	23.2	24.6	23.5
		25.9	18.8	24.6	22.5	26.6	27.4
		26.2	18.0	26.4	25.0	26.8	26.9
		Mean dry matter % as harvested: 75.7					
		Straw (at 85% dry matter): cwt per acre					
0 4	4	24.0	24.3	31.6	26.9	28.0	24.0
1 4	2	24.1	24.9	30.9	26.2	29.1	29.5
4 4	2	26.9	26.5	31.6	27.7	28.1	29.0
4 0	4	27.8	24.3	28.6	26.5	29.9	27.1
4 1	2	26.0	26.5	30.0	27.5	26.7	28.1
4 4	2	30.7	27.2	32.4	30.9	33.5	28.7
		Mean dry matter % as harvested: 54.2					

*On these plots the number of sub plots was halved.

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Microplots
Potatoes

Crop in old scheme Treatment	No. sub plots	Continuous wheat Plot			Continuous barley Plot							
		7	8	9	11a*	11b*	11a*	11b*	9	8	7	
P K												
		<u>Total tubers: tons per acre</u>										
0 4	4	15.10	14.85	18.64				15.71	16.23	17.78	18.67	17.34
1 4	2	15.34	16.96	17.71				16.03	15.07	18.64	19.39	16.67
4 4	2	16.32	16.09	19.74				18.59	14.58	19.15	19.85	18.99
4 0	4	11.92	15.16	16.30	15.03	16.63				16.41	16.93	14.27
4 2	2	14.18	14.87	17.71	13.62	18.43				16.44	17.19	16.96
4 8	2	16.96	16.15	19.33	18.83	18.83				18.17	18.75	18.23
		<u>Percentage ware (1 1/8" riddle)</u>										
0 4	4	91.5	88.7	91.2				91.6	88.3	93.6	94.8	94.6
1 4	2	90.9	88.1	92.0				90.0	89.9	93.5	94.4	93.5
4 4	2	91.8	92.0	91.9				87.5	89.0	92.9	93.4	95.7
4 0	4	84.6	85.9	89.8	84.8	89.1				92.1	91.2	91.0
4 2	2	91.5	89.5	88.2	86.5	91.7				92.8	91.6	94.2
4 8	2	89.4	93.3	92.7	92.8	87.7				90.6	91.9	92.0

* On these plots the number of sub plots was halved.