

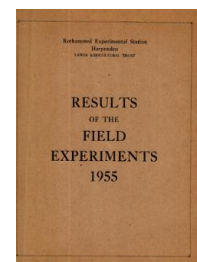
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## Yields of the Field Experiments 1955

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### 55/W/CA/4 Winter Wheat - Varieties, Seed Rates, Levels and Times of N

#### Rothamsted Research

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55/Ca/4.1

### WINTER WHEAT

Varieties, seed rates, levels and times of application of N: - Woburn, Roadpiece 1955, the 2nd year.

Design: 4 randomized blocks of 8 plots each, certain high order interactions being confounded with block differences. In addition each block contained 2 plots with no nitrogen, the variety x seed rate interaction being confounded.

Area of each plot: 0.0159 acre. Area harvested: 0.0140 acre.

Treatments: All combinations of:-

Varieties: Holdfast; Cappelle.

Seed rates: Holdfast,  $1\frac{1}{2}$ ; 3 bushels per acre.

Cappelle, 2; 4 bushels per acre.

Nitrogen: 0.5; 1.0 cwt N per acre as nitrochalk.

Time of application of N: half dressing in March and again in May; whole dressing mid March; mid April; mid May.

Basal dressing: 1 cwt per acre compound granular fertilizer (12% N, 12%  $P_2O_5$ , 15%  $K_2O$ ) combine drilled with seed.

Cultivations, etc.: Ploughed: Sept 28, 1954. Combine drilled: Oct 25. March top dressing applied: Mar 15, 1955. April top dressing applied: Apr 20. All plots sprayed with D.N.O.C. at  $1\frac{1}{2}$  gallons in 80 gallons: May 19. May top dressing applied: May 24. Combine harvested: Aug 22. Varieties: Holdfast and Cappelle. Previous crop: Wheat.

Note (1) The experiment is a repetition on the same plots of the one carried out in 1954 (see "Results of the Field Experiments 1954", Section 54/Ca/7). There were minor changes in the treatments but the same randomization was used.

(2) Records of incidence of disease (Take-all and Eyespot) and weeds, and counts of plant, shoot and ear numbers were made.

Standard error per plot.

Grain: 3.95 cwt per acre or 26.9% (12 d.f.)



Summary of Results

Grain: cwt per acre

	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	T <sub>4</sub>	Mean	
Mean ( $\pm 1.40$ )	16.5	16.9	18.9	12.2	16.1	
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	( $\pm 1.97$ )				( $\pm 0.99$ )	
V <sub>1</sub>	17.0	15.6	18.3	12.4	15.8	
V <sub>2</sub>	16.0	18.3	19.6	12.0	16.5	
Difference ( $\pm 2.79$ )	-1.0	+2.7	+1.3	-0.4	+0.7 ( $\pm 1.40$ )	
R <sub>1</sub>	14.1	16.3	16.8	9.6	14.2	
R <sub>2</sub>	18.9	17.6	21.1	14.8	18.1	
Difference ( $\pm 2.79$ )	+4.8	+1.3	+4.3	+5.2	+3.9 ( $\pm 1.40$ )	
N <sub>1</sub>	14.9	11.9	15.2	12.2	13.6	
N <sub>2</sub>	18.1	22.0	22.6	12.1	18.7	
Difference ( $\pm 2.79$ )	+3.2	+10.1	+7.4	-0.1	+5.1 ( $\pm 1.40$ )	
	R <sub>1</sub>	R <sub>2</sub>	N <sub>0</sub>	N <sub>1</sub>	N <sub>2</sub>	Mean
Mean ( $\pm 0.99$ )			( $\pm 1.40$ )	( $\pm 0.99$ )		
			8.8	13.6	18.7	14.7
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	( $\pm 1.40$ )		( $\pm 1.97$ )	( $\pm 1.40$ )		( $\pm 0.88$ )
V <sub>1</sub>	13.7	18.0	8.8	13.6	18.0	14.4
V <sub>2</sub>	14.7	18.2	8.8	13.5	19.4	14.9
R <sub>1</sub>			8.9	11.9	16.5	13.1
R <sub>2</sub>			8.6	15.3	20.9	16.2

Mean dry matter % as harvested: 85.5

Treatments

V<sub>1</sub> Holdfast R<sub>1</sub>, R<sub>2</sub> 1½, 3 bushels per acre N<sub>0</sub> No N  
 V<sub>2</sub> Cappelle R<sub>1</sub>, R<sub>2</sub> 2, 4 bushels per acre N<sub>1</sub> 0.46 cwt N per acre  
 N<sub>2</sub> 0.93 cwt N per acre

T<sub>1</sub> Nitrochalk half in March half in May T<sub>3</sub> Nitrochalk all in mid April  
 T<sub>2</sub> Nitrochalk all in mid March T<sub>4</sub> Nitrochalk all in mid May

The V x R table does not include the plots receiving no nitrogen.