ROTHAMSTED RESEARCH

Yields of the Field Experiments 1955

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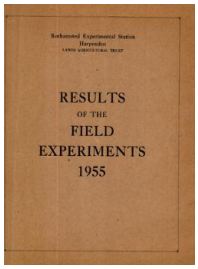

55/W/CA/4 Winter Wheat - Varieties, Seed Rates, Levels and Times of N

Rothamsted Research

Rothamsted Research (1956) *55/W/CA/4 Winter Wheat - Varieties, Seed Rates, Levels and Times of N ;* Yields Of The Field Experiments 1955, pp 75 - 76 **- DOI: https://doi.org/10.23637/ERADOC-1-175**

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, 1½; 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 1½ 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.)

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Summary of Results

Grain: cwt per acre

	T_1	T_2	T_3	T_4	Mean	
Mean (±1.40)	16.5	16.9	18.9	12.2	16.1	
			(±1.97)		(±0.99)	
V_1	17.0	15.6	18.3	12.4	15.8	
V_2	16.0	18.3	19.6	12.0	16.5	
Difference (±2.79)	-1.0	+2.7	+1.3	-0.4	+0.7	(±1.40)
R_1	14.1	16.3	16.8	9.6	14.2	
R_2	18.9	17.6	21.1	14.8	18.1	
Difference (±2.79)	+4.8	+1.3	+4.3	+5.2	+3.9	(±1.40)
N_1	14.9	11.9	15.2	12.2	13.6	
N_2	18.1	22.0	22.6	12.1	18.7	
Difference (±2.79)	+3.2	+10.1	+7.4	-0.1	+5.1	(±1.40)

	R_1	R_2	N_0	N_1	N_2	Mean
			(±1.40)	(±0.99)		
Mean (±0.99)			8.8	13.6	18.7	14.7
	(±1.40)		(±1.97)	(±1.40)		(±0.88)
V_1	13.7	18.0	8.8	13.6	18.0	14.4
V_2	14.7	18.2	8.8	13.5	19.4	14.9
R_1			8.9	11.9	16.5	13.1
R_2			8.6	15.3	20.9	16.2

Mean dry matter % as harvested: 85.5

Treatments

V_1 Holdfast
V_2 Cappelle

R_1, R_2 1½, 3 bushels per acre
R_1, R_2 2, 4 bushels per acre

N_0 No N
N_1 0.46 cwt N per acre
N_2 0.93 cwt N per acre

T_1 Nitrochalk half in March half in May
T_2 Nitrochalk all in mid March
T_3 Nitrochalk all in mid April
T_4 Nitrochalk all in mid May

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

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