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## Yields of the Field Experiments 1971

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### 71/S/CS/1 Row Spacing and Seed Rates After Intensive Wheat - Wheat

#### Rothamsted Research

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71/S/CS/1

ROW SPACING AND SEED RATES AFTER INTENSIVE WHEAT

**Object:** To study the effects of seed rate and row spacing on the yields of winter wheat. The effects of different periods of pre-cropping with winter wheat are also studied - Saxmundham, Oldershaw's and Garner's plots.

The sixth year on this site, first year of row spacing and seed rate treatments, winter wheat.

For previous years see 66/C/30(t), 67/C/23(t), 68/C/39 and 69-70/S/CS/1.

**Design:** A single replicate of 4 x 2 x 4 in 4 blocks of 4 plots each split lengthways into 2, plus one additional plot (not split into 2) per block. Additionally, all the plots are split breadthways into 3.

Whole plot dimensions: 5.49 x 40.2. Sub plot area harvested: 0.00273.

**Treatments:-**

Additional plots: One immediately previous continuous winter wheat crop (1), row spacing 18.9 cm (8.25 inches) and seed rate 212 kg (S), and N to sub plots as shown below, and all combinations of:-

Whole plots:

1. Cropping history: 2, 3, 4 and 5 years of immediately previous continuous winter wheat crops 1966-1970 (2, 3, 4, 5).

Half plots:

2. Row spacing: 15.2 cm (6 inches) (C), 30.5 cm (12 inches) (W).
3. Seed rates: 70.6 (R1), 141 (R2), 212 (R3), 283 (R4) kg.

One third plots:

4. N rates: 50.2 (N1), 100.4 (N2), 150.6 (N3) kg N as 'Nitro-Chalk'.

**Basal applications:** 1255 kg (0:20:20) applied to stubble in autumn before ploughing. Weedkiller: Metoxuron ('Dosanex' at 5.6 kg in 449 l).

**Cultivations, etc.:** Basal PK applied and ploughed in: 14 Sept, 1970. Seed drilled and basal NPK applied: 5 Oct. Weedkiller applied: 15 Apr, 1971. Test N applied: 21 Apr. Combine harvested: 25 Aug. Variety: Cappelle.

71/S/CS/1

NOTE: Green crop samples for estimates of total weight, grain straw ratios and leaf areas were taken.

Standard errors per sub plot.

Grain, tonnes/hectare: 0.337 or 5.9% (6 d.f.)

SUMMARY OF RESULTS

GRAIN: TONNES/HECTARE

	R1	R2	R3	R4	N1	N2	N3	Mean
	(±0.106)				(±0.084)*			(±0.053)
C	4.67	6.11	6.20	5.87	5.09	5.99	6.06	5.71
W	5.75	5.79	5.71	5.35	4.96	5.93	6.05	5.65
					(±0.119)*			(±0.075)
				R1	4.68	5.47	5.48	5.21
				R2	5.25	6.19	6.41	5.95
				R3	5.18	6.29	6.40	5.96
				R4	4.99	5.90	5.94	5.61
Mean (±0.060)					5.02	5.96	6.06	5.68

S 5.92  
General mean: 5.73

Mean D.M. %: 89.5

\* For use in horizontal and interaction comparisons only