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## Yields of the Field Experiments 1978

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### 78/R/WS/4 Irrigation, Lodging, Ccc and Microflora - S. Wheat

#### Rothamsted Research

Rothamsted Research (1979) *78/R/WS/4 Irrigation, Lodging, Ccc and Microflora - S. Wheat* ; Yields Of The Field Experiments 1978, pp 377 - 378 - DOI: <https://doi.org/10.23637/ERADOC-1-30>

78/R/WS/4

SPRING WHEAT

IRRIGATION, LODGING, CCC AND MICROFLORA

Object: To study the effects of irrigation, artificial lodging and a growth regulator on grain microflora and yield - Long Hoos IV 4.

Sponsor: R.A. Hill.

Design: 4 randomised blocks of 2 plots split into 4.

Whole plot dimensions: 8.53 x 9.75.

Treatments: All combinations of:-

Whole plots

1. IRRIGATN           Irrigation:

NONE	None
FULL	Full (108 mm)

Sub plots

2. LODGING           Lodging:

NONE	None, supported by netting
LODGED	Lodged, under netting

3. GRWTHREG           Growth regulator:

NONE	None
CHLORMEQ	Chlormequat (CCC) at 1.1 kg in 340 l on 19 June, 1978.

NOTES: (1) Lodging treatment was applied on 1 Aug, 1978.

(2) Irrigation was applied at 9 mm on each dry day between 11 Aug and harvest (11, 16, 17, 18, 21, 23, 24, 25 and 29 August and 5, 8 and 11 Sept).

Basal applications: Manures (0:14:28) at 720 kg. 'Nitro-chalk 25' at 500 kg combine drilled. Weedkillers: Mecoprop, bromoxynil and ioxynil ('Brittox' at 2.5 l in 340 l).

Seed: Timmo, sown at 180 kg.

Cultivations, etc.:- PK applied: 30 Sept, 1977. Ploughed: 6 Oct. Power harrowed: 31 Mar, 1978. Seed sown: 5 Apr. Weedkillers applied: 11 May. Combine harvested: 19 Sept.

NOTE: Grain microflora were assessed weekly after lodging and at harvest. 1000 grain weights were taken and grain assessed for mycotoxins, germination percentage and seedling vigour.

78/R/WS/4

GRAIN TONNES/HECTARE

\*\*\*\*\* TABLES OF MEANS \*\*\*\*\*

LODGING IRRIGATN	NONE	LODGED	MEAN	
NONE	5.15	2.47	3.81	
FULL	4.80	1.69	3.24	
MEAN	4.97	2.08	3.53	
GRWTHREG IRRIGATN	NONE	CHLORMEQ	MEAN	
NONE	3.81	3.81	3.81	
FULL	3.06	3.43	3.24	
MEAN	3.43	3.62	3.53	
GRWTHREG LODGING	NONE	CHLORMEQ	MEAN	
NONE	4.77	5.17	4.97	
LODGED	2.10	2.07	2.08	
MEAN	3.43	3.62	3.53	
LODGING GRWTHREG IRRIGATN	NONE	CHLORMEQ	LODGED	
NONE	5.02	5.29	NONE	2.60
FULL	4.53	5.06	CHLORMEQ	1.79

\*\*\*\*\* STANDARD ERRORS OF DIFFERENCES OF MEANS \*\*\*\*\*

TABLE	LODGING	GRWTHREG	IRRIGATN* LODGING
SED	0.119	0.119	0.168
TABLE	IRRIGATN* GRWTHREG	LODGING GRWTHREG	IRRIGATN* LODGING GRWTHREG
SED	0.168	0.168	0.238

\* WITHIN SAME LEVEL OF IRRIGATN ONLY

\*\*\*\*\* STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION \*\*\*\*\*

STRATUM	DF	SE	CV%
BLOCK.WP.SP	18	0.336	9.5

GRAIN MEAN DM% 84.4

SUB PLOT AREA HARVESTED 0.00087