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78/R/B/8 N and Foliar Diseases - Barley

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78/R/B/8

SPRING BARLEY

N AND FOLIAR DISEASES

Object: To study the effects of mildew on response to a range of nitrogen rates - Summerdells II.

Sponsors: J.F. Jenkyn, M.E. Finney.

Design: 3 randomised blocks of 6 plots split into 2.

Whole plot dimensions: 4.27 x 16.2.

Treatments: All combinations of:-

Whole plots

1. N Amounts of nitrogen fertiliser (kg N as 'Nitro-Chalk 26').
 Applied: 17 May, 1978:

25
50
70
90
110
135

Sub plots

2. MILDEW F Mildew fungicide:
- | | |
|----------|---------------------------------|
| NONE | None |
| TRIDEMOR | Tridemorph on 7 June and 6 July |

NOTES: (1) Tridemorph was applied at 0.53 kg in 340 l.
(2) Sides of plots were separated by a strip of Mazurka barley 2.13 m wide sprayed tridemorph at above rate on 14 June.

Basal applications: Manures: (0:20:20) at 310 kg, combine drilled. Weedkillers: Dicamba plus mecoprop and MCPA ('Banlene Plus' at 4.9 l in 220 l).

Seed: Zephyr, sown at 160 kg.

Cultivations, etc.: - Ploughed: 23 Nov, 1977. Spring-tine cultivated twice: 15 Mar, 1978. Heavy spring-tine cultivated, power harrowed, seed sown: 17 Apr. Weedkiller applied: 26 May. Combine harvested: 8 Sept. Previous crops: W. oats 1976, barley 1977.

NOTES: (1) Seedling emergence counts were made.
(2) Mildew and brown rust were assessed throughout the season.
(3) Samples were taken for nitrogen analysis.
(4) Ear counts were made before harvest.

78/R/B/8

GRAIN TONNES/HECTARE

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

MILDEW F N	NONE	TRIDEMOR	MEAN
25	4.30	4.26	4.28
50	4.32	5.01	4.66
70	4.77	5.30	5.04
90	5.02	5.50	5.26
110	5.07	5.45	5.26
135	5.16	5.88	5.52
MEAN	4.77	5.23	5.00

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

TABLE	N	MILDEW F	N MILDEW F
SED	0.245	0.083	0.285
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:			
N			0.204

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

STRATUM	DF	SE	CV%
BLOCK.WP	10	0.301	6.0
BLOCK.WP.SP	12	0.249	5.0

GRAIN MEAN DM% 79.0

SUB PLOT AREA HARVESTED 0.00163