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79/R/B/12 N and Mildew - Barley

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79/R/B/12

SPRING BARLEY

N AND MILDEW

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

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

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

Whole plot dimensions: 4.27 x 19.2.

Treatments: All combinations of:-

Whole plots

1. N Amounts of nitrogen fertiliser (kg N):

25
50
70
90
110
135

Sub plots

2. MILDEW F Mildew fungicide:

NONE None
TRIDEMOR Tridemorph on 18 June

NOTES: (1) Tridemorph was applied at 0.53 kg in 340 l.
(2) Sides of plots were separated by a strip of Magnum barley 2.13 m wide sown at 160 kg. Seed was dressed with ethirimol and combine drilled with (20:14:14) at 440 kg.
(3) 25 kg N was applied to all treatments as the basal (20:14:14) at drilling. The remaining N was broadcast by drill as 'Nitro-Chalk' on 17 May.

Basal applications: Manures: (20:14:14) at 125 kg, combine drilled. Weedkillers: Dicamba with mecoprop and MCPA (as 'Banlene Plus' at 4.9 kg in 220 l).

Seed: Zephyr, sown at 160 kg.

Cultivations, etc.: - Subsoiled, tines 100 cm apart and 45 cm deep: 7 Nov, 1978. Ploughed: 13 Nov. Spring-tine cultivated: 18 Apr, 1979. Seed sown: 19 Apr. Weedkillers applied: 1 June. Combine harvested: 28 Aug. Previous crops: Beans 1977, wheat 1978.

NOTE: Crop samples were taken periodically and nitrogen contents measured. Leaf diseases were assessed on three occasions. Counts were made of numbers of plants, ears, grains per ear. 1000 grain weights were measured.

79/R/B/12

GRAIN TONNES/HECTARE

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

MILDEW F N	NONE	TRIDEMOR	MEAN
25	3.81	4.21	4.01
50	4.67	4.97	4.82
70	4.64	5.80	5.22
90	5.52	6.10	5.81
110	5.55	6.09	5.82
135	5.42	6.12	5.77
MEAN	4.94	5.55	5.24

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

TABLE	N	MILDEW F	N MILDEW F

SED	0.131	0.105	0.224
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:			
N			0.257

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

STRATUM	DF	SE	CV%
BLOCK.WP	10	0.161	3.1
BLOCK.WP.SP	12	0.314	6.0

GRAIN MEAN DM% 81.9

SUB PLOT AREA HARVESTED 0.00195