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74/R/B/8 Distance and Mildew Spread - Barley

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74/R/B/8

BARLEY

DISTANCE AND MILDEW SPREAD

Object: To study the effects of fungicidal sprays, applied to barley at different times on yield and incidence of mildew. The effects of separating the plots by mildew-free barley are also studied - Summerdells II.

Sponsors: J.F. Jenkyn, A. Bainbridge.

Design: Two 4 x 4 Latin squares (of the same pattern).

Whole plot dimensions: 4.27 x 9.14. Area harvested: 0.00195.

Treatments: All combinations of:

1. Distance apart of plots:	DISTANCE
Close together (1 m)	Close
Far apart (19 m)	Far
2. Fungicidal sprays:	FUNGICIDE
None	None
Chloraniformethan spray 'late' (3 June, 1974)	Chlor L
Tridemorph spray 'early' (20 May)	Tridem E
Tridemorph spray 'late' (3 June)	Tridem L

- NOTES: (1) Chloraniformethan was applied at 0.29 kg in 340 l, tridemorph at 0.53 kg in 340 l.
- (2) The surrounds of 'Far' plots and 30 m between 'Far' and 'Close' squares were sprayed twice (28 May, 2 July) with tridemorph at 0.53 kg in 450 l.
- (3) All 'Far' plots had adjacent plots, sprayed twice (20 May, 8 July) with tridemorph at 0.53 kg in 340 l, from which yields were taken for covariance analysis.

Basal applications: Manures: (20:14:14) at 440 kg combine drilled.

Weedkiller: Dicamba with mecoprop and MCPA ('Tetralix Plus' at 7.0 l in 450 l).

Seed: Zephyr, sown at 160 kg.

74/R/B/8

Cultivations, etc.:— Ploughed: 16 Nov, 1973. Spring-time cultivated: 29 Mar, 1974. Seed sown: 1 Apr. Weedkiller applied: 21 May. Combine harvested: 23 Aug. Previous crops: Beans and potatoes 1972, barley 1973.

NOTE: Estimates were made of seedling emergence. Assessments were made of mildew on several occasions and ear counts in early August.

Standard errors per plot. Grain, tonnes/hectare.

DISTANCE Close: 0.124 or 2.4% (6 d.f.)

DISTANCE Far: 0.157 or 3.0% (6 d.f.)

Pooled within DISTANCES: 0.141 or 2.7% (12 d.f.)

TABLES OF MEANS

GRAIN: TONNES/HECTARE

	FUNGICIDE				Mean
	None	Chlor L	Tridem E	Tridem L	
DISTANCE					
Close	4.75	5.21	5.51	5.58	5.26
Far	4.56	5.14	5.66	5.45	5.20
Far-Close	-0.19	-0.07	+0.15	-0.13	-0.06

STANDARD ERRORS OF DIFFERENCES

DISTANCE	FUNGICIDE		DISTANCE*
	DISTANCE Close	DISTANCE Far	
	0.88	0.111	0.100

* For use only in the comparison of two differences

Mean D.M.% 86.2