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74/R/CS/139 Fungicides and K - Barley

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74/R/CS/139

FUNGICIDES AND K

Object: To study the effects of fungicides and rates of potassium on the incidence of mildew and yield of barley - W. Barnfield II.

Sponsors: J.F. Jenkyn, E.W. Broom.

The first year, barley.

Design: 3 randomised blocks of 16 plots.

Whole plot dimensions: 4.27 x 20.1. Area harvested: 0.00429.

Treatments: All combinations of:

1. Fungicides:	FUNGICIDE
None (duplicated)	None
Ethirimol as a seed dressing (commercially dressed)	Ethirimo
Tridemorph, foliar spray at 0.53 kg in 340 l	Tridemor
2. Potassium fertiliser (kg K ₂ O):	K ₂ O
None	0
50	50
100	100
200	200

Basal applications: Manures: (30:13:0) at 340 kg, combine drilled.

Weedkillers: Dicamba with mecoprop and MCPA ('Tetralix Plus' at 7.0 l in 220 l). Paraquat 0.56 kg ion in 220 l.

Seed: Zephyr, sown at 160 kg.

Cultivations, etc.: Paraquat applied: 4 Oct, 1973. Ploughed: 10 Oct. K applied: 8 Mar, 1974. Spring-tine cultivated: 23 Mar. Power harrowed: 26 Mar. Seed sown: 28 Mar. Weedkiller applied: 21 May. Combine harvested: 23 Aug. Previous crops: Barley 1972 and 1973.

NOTE: Soil samples for P and K were taken from selected plots in March. Counts were made of seedling emergence. Foliar diseases were assessed on three occasions. Crop samples were taken for K analysis on 17 July, 1974.

Standard error per plot.

Grain, tonnes/hectare: 0.271 or 6.9% (34 d.f.).

74/R/CS/139

TABLES OF MEANS

GRAIN: TONNES/HECTARE

	K20				Mean
	0	50	100	200	
FUNGCIDE					
None	3.22	3.56	3.84	3.87	3.62
Ethirimo	3.68	4.37	4.41	4.77	4.31
Tridemor	3.54	4.08	4.44	4.56	4.15
Mean	3.42	3.90	4.13	4.26	3.93

STANDARD ERROR OF DIFFERENCES

	FUNGCIDE	K20
None v Ethirimo or Tridemor	0.096	0.111
Ethirimo v Tridemor	0.111	

	FUNGCIDE K20
Between any of FUNGCIDE, None	0.156
Between any of FUNGCIDE, Ethirimo or Tridemor	0.221
Between any of FUNGCIDE, None and any of Ethirimo or Tridemor	0.191

Mean D.M.% 84.4