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72/R/B/5 Barley Control of Cereal Aphids and Bydv

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72/R/B/5

BARLEY

CONTROL OF CEREAL APHIDS AND BYDV

Object: To study the effects of controlling cereal aphids on the incidence of barley yellow dwarf virus and yield of barley - Whittlocks.

Sponsor: R.T. Plumb.

Design: 4 randomised blocks of 12 plots.

Whole plot dimensions: 6.40 x 24.4. Area harvested: 0.00390.

Treatments: All combinations of:-

1. Phorate, as granules to seedbed: 0, 2.5, 5.0 kg.
2. Menazon, spray, in late May (M): None (O), menazon ('Saphi-Col' at 0.7 l in 370 l) applied on 1 June (S).
3. Menazon in late June (J): None (O), menazon ('Saphi-Col' at 0.7 l in 440 l) applied on 30 June (S).

Basal applications: 440 kg (20:15:15) combine drilled. Weedkiller: Bromoxynil, ioxynil, dichlorprop and MCPA ('Tetroxone' at 5.6 l in 220 l).

Seed: Julia sown at 160 kg.

Cultivations, etc.: Deep-tine cultivated: 9 Nov, 1971. Phorate applied: 25 Mar. Seed combine drilled: 29 Mar, 1972, Weedkiller applied: 8 May. Combine harvested: 24 Aug. Previous crops: Potatoes 1970, fallow 1971.

NOTE: Counts of plants with virus symptoms and of numbers and species of aphids were made on four occasions. Estimates of mildew infection (*Erysiphe graminis*) were made on two occasions. All plots were badly lodged at harvest.

Standard error per plot.

Grain, tonnes/hectare: 0.219 or 3.4% (33 d.f.)

72/R/B/5

TABLES OF MEANS

GRAIN: TONNES/HECTARE

	M		J		Mean
	O	S	O	S	
PHORATE: KG/HA					
0	6.36	6.56	6.41	6.51	6.46
2.5	6.58	6.51	6.48	6.61	6.55
5.0	6.59	6.53	6.47	6.66	6.56
		M			
		O	6.44	6.58	6.51
		S	6.47	6.60	6.53
Mean			6.45	6.59	6.52
M		O		S	
J		O		S	
PHORATE: KG/HA					
0	6.26	6.46	6.56	6.55	
2.5	6.52	6.64	6.44	6.59	
5.0	6.54	6.65	6.40	6.67	

STANDARD ERRORS OF DIFFERENCES

PHORATE	M	J	PHORATE	PHORATE	M	PHORATE
			M	J	J	M
						J
0.078	0.063	0.063	0.110	0.110	0.090	0.155

Mean D.M. %: 85.2