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Yields of the Field Experiments 1983

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83/R/CS/271

APHID CONTROL BY NATURAL ENEMIES

Object: To study the effects of early introduction of aphids to ryegrass on subsequent aphid populations on w. wheat - Black Horse I.

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The second year, w. wheat, ryegrass.

For previous year see 82/R/CS/271.

Design: 2 randomised blocks of 4 plots.

Whole plot dimensions: 48 x 48.

Treatments: All combinations of:-

1 RYEGRASS	Provision of ryegrass:
NONE	None
UNDRSOWN	Undersown
2. APHIDS	Aphids applied in April and early May:
NONE	None
METO FES	Metopolophium festucae, on seven occasions, total 20 per square metre

NOTE: Plots with ryegrass in 1982 were re-sown to ryegrass for 1983. Two extra plots were established for the 1983 combination RYEGRASS NONE, APHIDS NONE.

Basal applications: Manures: (5:14:30) at 340 kg. 'Nitro-Chalk' at 280 kg followed by 630 kg. Weedkillers: Methabenzthiazuron at 1.2 kg in 120 l. Dicamba, mecoprop and MCPA (as 'Herrisol' at 5.0 l) in 250 l with the prochloraz. Fungicides: Prochloraz at 0.40 kg. Carbendazim at 0.15 kg with maneb at 1.6 kg and tridemorph at 0.38 kg in 250 l.

Seed: Aquila: sown at 200 kg.
Ryegrass: S24 sown at 22 kg.

Cultivations, etc.:- Ploughed: 31 Aug, 1982. NPK applied: 18 Sept. Spring-tine cultivated: 21 Sept. Spring-tine cultivated, wheat alone plots sown: 11 Oct. Wheat with undersown ryegrass sown: 12 Oct. Methabenzthiazuron applied: 16 Oct. First N applied: 15 Mar, 1983. Second N applied: 13 Apr. 'Herrisol' with prochloraz applied: 16 Apr. Carbendazim with maneb and tridemorph applied: 21 June. Combine harvested: 14 Aug.

NOTE: Cereal aphids were counted on seven occasions during June and July. Above-ground fauna were sampled on nine occasions between May and July. Ground predators were counted weekly from early May to early August. Parasites and fungal pathogens of aphids were assessed during June and July.

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83/R/CS/271

GRAIN TONNES/HECTARE

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

APHIDS	NONE	METO FES	MEAN
RYEGRASS			
NONE	6.69	6.23	6.46
UNDRSOWN	5.43	5.35	5.39
MEAN	6.06	5.79	5.92

GRAIN MEAN DM% 87.3

PLOT AREA HARVESTED 0.01536

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