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80/R/WW/5 Winter Wheat Integrated Pest Control

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80/R/WW/5

WINTER WHEAT

INTEGRATED PEST CONTROL

Object: To study the effects of chemical and biological treatments on the incidence of pests and beneficial insects and on the yield of w. wheat - Stackyard.

Sponsors: W. Powell, R. Bardner, C.A. Edwards, G.J.W. Dean, A. Dewar, N. Wilding, J.R. Lofty, K.E. Fletcher, R.T. Plumb.

Design: 3 randomised blocks of 5 plots.

Whole plot dimensions: 19.2 x 13.7

Treatments:

TREATMNT	Chemical and biological treatments:
NONE	None
BENOMYL	Benomylat 0.56 kg in 360 l on 8 May, 1980
DIMETHOA	Dimethoate at 0.34 l in 600 l on 11 June
PIRIMICA	Pirimicarb at 0.14 kg in 600 l on 11 June
ENTOMOPH	Biological control of aphids by the release of 86 Metopolophium dirhodum per square metre on 11 June and 15 Sitobion avenae per square metre on 12 June, both species infected with Entomophthora aphidis.

Basal applications: Manures: (10:23:23) at 250 kg, combine drilled. 'Nitro-Chalk' at 560 kg. Weedkillers: Isoproturon at 2.1 kg with mecoprop at 2.5 l in 220 l.

Seed: Flanders, not dressed insecticide, sown at 200 kg.

Cultivations, etc.: - Heavy spring-tine cultivated: 23 Aug, 1979. Ploughed: 13 Sept. Rotary harrowed: 4 Oct. Seed sown: 6 Oct. Weedkillers applied: 29 Feb, 1980. N applied: 8 Apr. Combine harvested: 20 Aug. Previous crops: S. wheat 1978, w. oats 1979.

NOTE: Ground surface insects were counted weekly between April and August and aerial insects weekly between May and July. Soil insects were counted in June. Aphid numbers, infection with Entomophthora and aphid parasite numbers were assessed in June and July.

80/R/WW/5

GRAIN TONNES/HECTARE

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

TREATMNT	NONE	BENOMYL	DIMETHOA	PIRIMICA	ENTOMOPH	MEAN
	8.24	8.53	8.54	8.61	7.89	8.36

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

TABLE	TREATMNT
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SED	0.193

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

STRATUM	DF	SE	CV%
BLOCK.WP	8	0.237	2.8

GRAIN MEAN DM% 83.4

PLOT AREA HARVESTED 0.00293