

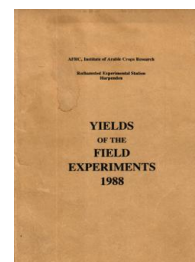
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88/R/WW/5 Aphicide, N and Fungicide - W. Wheat

Rothamsted Research

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88/R/WW/5

WINTER WHEAT

APHICIDE, N AND FUNGICIDE

Object: To determine the economic thresholds for cereal aphids with different levels of inputs - Sawyers II.

Sponsor: N. Carter.

Design: 3 randomised blocks of 12 plots.

Whole plot dimensions: 3.0 x 12.0.

Treatments: All combinations of:-

1. **APHICIDE** Aphicide:

 NONE None
 PIRIMICA Pirimicarb applied at 0.14 kg in 260 l on 6 May, 1988, in 200 l on 20 May and in 260 l on 6 June, 20 June and 12 July
2. **N RATE** Nitrogen fertilizer (kg N) as 'Nitram' on 22 Apr, 1988:

 105
 140
 175
3. **FUNGICIDE** Fungicides:

 NONE None
 31+39+65 Fungicide sprays at growth stages 31, 39 and 65:
 G.S. 31 - Prochloraz at 0.40 kg and carbendazim at 0.15 kg in 200 l on 21 Apr, 1988
 G.S. 40 - Propiconazole at 0.12 kg and tridemorph at 0.25 kg in 200 l on 20 May
 G.S. 65 - Fenpropimorph at 0.75 kg with chlorothalonil at 1.0 kg in 260 l on 20 June

Basal applications: Weedkillers: Chlortoluron at 3.5 kg in 200 l. Mecoprop at 3.0 kg in 200 l. Growth regulator: Chlormequat at 1.3 kg in 260 l.

Seed: Avalon, sown at 180 kg.

Cultivations, etc.:- Deep-tine cultivated: 5 Oct, 1987. Heavy spring-tine cultivated, spring-tine cultivated, rotary harrowed, seed sown: 6 Oct. Chlortoluron applied: 8 Nov. Mecoprop applied: 25 Apr, 1988. Growth regulator applied: 6 May. Combine harvested: 23 Aug. Previous crops: W. barley 1986, potatoes 1987.

NOTE: Aphids were counted from mid-May until late July. Plant dry weights were measured at anthesis. Disease assessments were made in late June and late July. Components of yield were measured.

88/R/WW/5

GRAIN TONNES/HECTARE

***** Tables of means *****

N RATE	105	140	175	Mean
APHICIDE				
NONE	7.79	8.29	8.49	8.19
PIRIMICA	8.44	8.83	9.15	8.81
Mean	8.12	8.56	8.82	8.50

FUNGCIDE	NONE	31+39+65	Mean
APHICIDE			
NONE	7.85	8.54	8.19
PIRIMICA	8.55	9.06	8.81
Mean	8.20	8.80	8.50

FUNGCIDE	NONE	31+39+65	Mean
N RATE			
105	7.94	8.29	8.12
140	8.25	8.88	8.56
175	8.41	9.23	8.82
Mean	8.20	8.80	8.50

APHICIDE	FUNGCIDE	NONE	31+39+65
NONE	N RATE		
	105	7.56	8.02
	140	7.86	8.73
	175	8.13	8.86
PIRIMICA	105	8.33	8.55
	140	8.63	9.04
	175	8.70	9.60

*** Standard errors of differences of means ***

APHICIDE	N RATE	FUNGCIDE	APHICIDE
			N RATE
0.135	0.166	0.135	0.235
APHICIDE	N RATE	APHICIDE	
FUNGCIDE	FUNGCIDE	N RATE	
		FUNGCIDE	
0.192	0.235	0.332	

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	22	0.406	4.8
GRAIN MEAN DM%	83.5		
PLOT AREA HARVESTED	0.00331		