

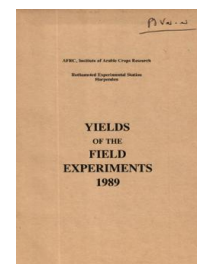
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89/R/B/2 Sowing Dates, Aphids and Bydv - W. Barley

Rothamsted Research

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89/R/B/2

WINTER BARLEY

SOWING DATES, APHIDS AND BYDV

Object: To study the relationship of aphid numbers in suction trap samples to crop populations and the incidence of BYDV on winter barley sown on a range of dates - Great Field II.

Sponsors: N. Carter, R.J. Gutteridge, J.F. Jenkyn, R.T. Plumb.

Design: 4 randomised blocks of 10 plots.

Whole plot dimensions: 3.0 x 23.0 N.BLOCKS.
3.0 x 18.0 S.BLOCKS.

Treatments: All combinations of:-

1. **SOWDATE** Dates of sowing:

 12 SEPT 12 September, 1988
 22 SEPT 22 September
 3 OCT 3 October
 17 OCT 17 October
 27 OCT 27 October

2. **APHICIDE** Aphicide:

 NONE None
 CYPERMET Cypermethrin at 0.025 kg in 380 l on 7 Nov, 1988
 except on SOWDATE 27 OCT, applied on 11 Jan, 1989

NOTE: All SOWDATE treatments were cultivated by rotary grubber on 12 Sept, 1988 and rotary harrowed on the day of sowing.

Basal applications: Manures: 'Nitram' at 480 kg. Weedkillers: Glyphosate at 0.27 kg in 200 l. Chlortoluron at 3.5 kg in 200 l. Isoproturon at 1.5 kg with mecoprop at 2.2 kg, ioxynil at 0.28 kg and bromoxynil at 0.28 kg in 200 l. Fungicides: Propiconazole at 0.12 kg with tridemorph at 0.38 kg in 200 l.

Seed: Igri, sown at 150 kg.

Cultivations, etc.:- Rotary cultivated: 11 Aug, 1988, and 15 Aug. Glyphosate applied: 6 Sept. Chlortoluron applied: 16 Nov. N applied: 19 Apr, 1989. Remaining weedkillers applied: 2 May. Fungicides applied: 10 May. Combine harvested: 14 July. Previous crops: W. barley 1987 and 1988.

NOTE: Aphids were sampled from late September to June. Visual estimates of BYDV were made throughout the season, a more detailed estimate was made at the end of April. Components of yield were measured. Take-all was assessed in summer.

89/R/B/2

GRAIN TONNES/HECTARE

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

APHICIDE SOWDATE	NONE	CYPERMET	Mean
12 SEPT	3.22	3.79	3.50
22 SEPT	3.54	4.26	3.90
3 OCT	3.49	3.75	3.62
17 OCT	2.92	3.37	3.14
27 OCT	3.42	3.68	3.55
Mean	3.32	3.77	3.54

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

SOWDATE	APHICIDE	SOWDATE APHICIDE
0.166	0.105	0.235

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	27	0.332	9.4
GRAIN MEAN DM%	85.0		
PLOT AREA HARVESTED	0.00230		