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# Yields of the Field Experiments 1986

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

### Rothamsted Research

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86/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.T. Plumb.

Design: 4 randomised blocks of 10 plots.

Whole plot dimensions: 3.0 x 10.0.

Treatments: All combinations of:-

1. SOWDATE            Dates of sowing:

|         |                    |
|---------|--------------------|
| 13 SEPT | 13 September, 1985 |
| 23 SEPT | 23 September       |
| 2 OCT   | 2 October          |
| 11 OCT  | 11 October         |
| 23 OCT  | 23 October         |

2. APHICIDE            Aphicide:

|          |                                                   |
|----------|---------------------------------------------------|
| NONE     | None                                              |
| CYPERMET | Cypermethrin at 0.025 kg in 280 l on 14 Nov, 1985 |

NOTE: The crop was netted against birds from mid-June until maturity.

Basal applications: Manures: 'Nitram' at 130 kg, and again at 340 kg.  
Weedkillers: Isoproturon at 2.0 kg with clopyralid at 0.07 kg, bromoxynil octanoate at 0.34 kg and mecoprop at 2.5 kg in 200 l.  
Fungicides: Prochloraz at 0.4 kg and carbendazim at 0.15 kg in 200 l. Triadimenol at 0.062 kg in 500 l.

Seed: Igri, sown at 150 kg.

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Cultivations, etc.:- Cultivated by rotary grubber: 9 Sept, 1985.  
 SOWDATE 13 SEPT plots heavy spring-tine cultivated, seed sown:  
 13 Sept. SOWDATE 23 SEPT plots rotary harrowed, seed sown: 23 Sept.  
 Remaining plots heavy spring-tine cultivated, SOWDATE 2 OCT plots  
 rotary harrowed and seed sown: 2 Oct. SOWDATE 11 OCT plots rotary  
 harrowed, seed sown: 11 Oct. SOWDATE 23 OCT plots rotary harrowed,  
 seed sown: 23 Oct. First N applied: 13 Mar, 1986. Second N applied:  
 25 Apr. Weedkillers applied: 29 Apr. Prochloraz and carbendazim  
 applied: 16 May. Triadimenol applied: 9 June. Combine harvested:  
 1 Aug. Previous crops: S. barley 1984 and 1985.

NOTE: Aphids were counted from October to January and in April. Visual estimates of BYDV were made in May. Components of yield were measured.

GRAIN TONNES/HECTARE

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

| SOWDATE<br>APHICIDE | 13 SEPT | 23 SEPT | 2 OCT | 11 OCT | 23 OCT | MEAN |
|---------------------|---------|---------|-------|--------|--------|------|
| NONE                | 4.28    | 4.80    | 5.40  | 6.00   | 5.31   | 5.16 |
| CYPERMET            | 4.69    | 4.94    | 5.88  | 6.16   | 5.50   | 5.43 |
| MEAN                | 4.48    | 4.87    | 5.64  | 6.08   | 5.41   | 5.30 |

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

| TABLE | SOWDATE | APHICIDE | SOWDATE<br>APHICIDE |
|-------|---------|----------|---------------------|
| SED   | 0.142   | 0.090    | 0.201               |

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

| STRATUM             | DF      | SE    | CV% |
|---------------------|---------|-------|-----|
| BLOCK.WP            | 27      | 0.284 | 5.4 |
| GRAIN MEAN DM%      | 82.1    |       |     |
| PLOT AREA HARVESTED | 0.00231 |       |     |