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## Yields of the Field Experiments 1976

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### 76/R/B/1 Factors Affecting Mildew Control and Yield - Barley

#### Rothamsted Research

Rothamsted Research (1977) *76/R/B/1 Factors Affecting Mildew Control and Yield - Barley* ; Yields Of The Field Experiments 1976, pp 294 - 297 - DOI: <https://doi.org/10.23637/ERADOC-1-15>

76/R/B/1

WINTER BARLEY

FACTORS AFFECTING MILDEW CONTROL AND YIELD

Object: To study the effects and interactions of sowing date, seed rate, mildew control and timing of spring nitrogen on the incidence of mildew and yield of winter barley - Gt. Knott 1.

Sponsors: A. Bainbridge, M.E. Finney, J.F. Jenkyn.

Design: Single replicate of 2 x 2 x 2 x 2 x 2 x 2.

Whole plot dimensions: 2.13 x 6.10.

Treatments: All combinations of:-

1. SOW DATE Sowing Dates:

|         |              |
|---------|--------------|
| 24 SEPT | 24 September |
| 6 NOV   | 6 November   |

2. SEEDRATE Seed Rates (kg):

|     |     |
|-----|-----|
| 78  | 78  |
| 156 | 156 |

3. TRIDEMOR(1) Tridemorph foliar spray to early growth:

|         |                                                                |
|---------|----------------------------------------------------------------|
| NONE    | None                                                           |
| SPRAYED | Sprayed (14 Nov to SOW DATE 24 SEPT, 25 Feb to SOW DATE 6 NOV) |

4. TRIDEMOR(2) Tridemorph foliar spray in April:

|         |                 |
|---------|-----------------|
| NONE    | None            |
| SPRAYED | Sprayed (9 Apr) |

5. TRIDEMOR(3) Tridemorph foliar spray in May:

|         |                  |
|---------|------------------|
| NONE    | None             |
| SPRAYED | Sprayed (13 May) |

6. N TIME Time of applying nitrogen (at 75 kg):

|       |                     |
|-------|---------------------|
| MARCH | Early March (9 Mar) |
| APRIL | Late April (27 Apr) |

NOTE: Tridemorph applied at 0.53 kg in 340 l.

Basal applications: Weedkillers: Mecoprop at 1.7 kg in 340 l.

Seed: Astrix.

Cultivations, etc.: Ploughed: 16 Sept, 1975. Spring-tine cultivated twice: 16, 17 Sept. Rotary harrowed for early sowing: 22 Sept. Power harrowed for late sowing: 6 Nov. Weedkiller applied: 13 Nov. Combine harvested: 8 July, 1976. Previous crops: Winter wheat 1974, beans 1975.

NOTE: Seedling emergence counts were made. Leaf diseases were assessed on six occasions. Ear counts were made in early July.

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GRAIN TONNES/HECTARE

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

|             |      |         |      |
|-------------|------|---------|------|
| SEEDRATE    | 78   | 156     | MEAN |
| SOW DATE    |      |         |      |
| 24 SEPT     | 7.78 | 8.02    | 7.90 |
| 6 NOV       | 4.41 | 4.44    | 4.42 |
| MEAN        | 6.09 | 6.23    | 6.16 |
| TRIDEMOR(1) | NONE | SPRAYED | MEAN |
| SOW DATE    |      |         |      |
| 24 SEPT     | 7.66 | 8.14    | 7.90 |
| 6 NOV       | 4.27 | 4.57    | 4.42 |
| MEAN        | 5.97 | 6.35    | 6.16 |
| TRIDEMOR(1) | NONE | SPRAYED | MEAN |
| SEEDRATE    |      |         |      |
| 78          | 5.90 | 6.28    | 6.09 |
| 156         | 6.03 | 6.43    | 6.23 |
| MEAN        | 5.97 | 6.35    | 6.16 |
| TRIDEMOR(2) | NONE | SPRAYED | MEAN |
| SOW DATE    |      |         |      |
| 24 SEPT     | 7.66 | 8.14    | 7.90 |
| 6 NOV       | 4.25 | 4.60    | 4.42 |
| MEAN        | 5.95 | 6.37    | 6.16 |
| TRIDEMOR(2) | NONE | SPRAYED | MEAN |
| SEEDRATE    |      |         |      |
| 78          | 5.98 | 6.20    | 6.09 |
| 156         | 5.93 | 6.54    | 6.23 |
| MEAN        | 5.95 | 6.37    | 6.16 |
| TRIDEMOR(2) | NONE | SPRAYED | MEAN |
| TRIDEMOR(1) |      |         |      |
| NONE        | 5.78 | 6.15    | 5.97 |
| SPRAYED     | 6.12 | 6.59    | 6.35 |
| MEAN        | 5.95 | 6.37    | 6.16 |
| TRIDEMOR(3) | NONE | SPRAYED | MEAN |
| SOW DATE    |      |         |      |
| 24 SEPT     | 7.80 | 8.00    | 7.90 |
| 6 NOV       | 4.35 | 4.49    | 4.42 |
| MEAN        | 6.08 | 6.24    | 6.16 |
| TRIDEMOR(3) | NONE | SPRAYED | MEAN |
| SEEDRATE    |      |         |      |
| 78          | 5.99 | 6.19    | 6.09 |
| 156         | 6.17 | 6.29    | 6.23 |
| MEAN        | 6.08 | 6.24    | 6.16 |

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GRAIN TONNES/HECTARE

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

|             |       |         |      |
|-------------|-------|---------|------|
| TRIDEMOR(3) | NONE  | SPRAYED | MEAN |
| TRIDEMOR(1) |       |         |      |
| NONE        | 5.96  | 5.98    | 5.97 |
| SPRAYED     | 6.20  | 6.51    | 6.35 |
| MEAN        | 6.08  | 6.24    | 6.16 |
| TRIDEMOR(3) | NONE  | SPRAYED | MEAN |
| TRIDEMOR(2) |       |         |      |
| NONE        | 5.78  | 6.13    | 5.95 |
| SPRAYED     | 6.38  | 6.36    | 6.37 |
| MEAN        | 6.08  | 6.24    | 6.16 |
| N TIME      | MARCH | APRIL   | MEAN |
| SOW DATE    |       |         |      |
| 24 SEPT     | 7.69  | 8.11    | 7.90 |
| 6 NOV       | 4.25  | 4.59    | 4.42 |
| MEAN        | 5.97  | 6.35    | 6.16 |
| N TIME      | MARCH | APRIL   | MEAN |
| SEEDRATE    |       |         |      |
| 78          | 5.88  | 6.31    | 6.09 |
| 156         | 6.06  | 6.40    | 6.23 |
| MEAN        | 5.97  | 6.35    | 6.16 |
| N TIME      | MARCH | APRIL   | MEAN |
| TRIDEMOR(1) |       |         |      |
| NONE        | 5.78  | 6.16    | 5.97 |
| SPRAYED     | 6.16  | 6.54    | 6.35 |
| MEAN        | 5.97  | 6.35    | 6.16 |
| N TIME      | MARCH | APRIL   | MEAN |
| TRIDEMOR(2) |       |         |      |
| NONE        | 5.84  | 6.07    | 5.95 |
| SPRAYED     | 6.10  | 6.63    | 6.37 |
| MEAN        | 5.97  | 6.35    | 6.16 |
| N TIME      | MARCH | APRIL   | MEAN |
| TRIDEMOR(3) |       |         |      |
| NONE        | 5.86  | 6.29    | 6.08 |
| SPRAYED     | 6.08  | 6.41    | 6.24 |
| MEAN        | 5.97  | 6.35    | 6.16 |

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GRAIN TONNES/HECTARE

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

| TABLE | SOW DATE | SEEDRATE | TRIDEMOR(1) | TRIDEMOR(2) |
|-------|----------|----------|-------------|-------------|
| SED   | 0.124    | 0.124    | 0.124       | 0.124       |

| TABLE | TRIDEMOR(3) | N TIME | SOW DATE<br>SEEDRATE | SOW DATE<br>TRIDEMOR(1) |
|-------|-------------|--------|----------------------|-------------------------|
| SED   | 0.124       | 0.124  | 0.175                | 0.175                   |

| TABLE | SEEDRATE<br>TRIDEMOR(1) | SOW DATE<br>TRIDEMOR(2) | SEEDRATE<br>TRIDEMOR(2) | TRIDEMOR(1)<br>TRIDEMOR(2) |
|-------|-------------------------|-------------------------|-------------------------|----------------------------|
| SED   | 0.175                   | 0.175                   | 0.175                   | 0.175                      |

| TABLE | SOW DATE<br>TRIDEMOR(3) | SEEDRATE<br>TRIDEMOR(3) | TRIDEMOR(1)<br>TRIDEMOR(3) | TRIDEMOR(2)<br>TRIDEMOR(3) |
|-------|-------------------------|-------------------------|----------------------------|----------------------------|
| SED   | 0.175                   | 0.175                   | 0.175                      | 0.175                      |

| TABLE | SOW DATE<br>N TIME | SEEDRATE<br>N TIME | TRIDEMOR(1)<br>N TIME | TRIDEMOR(2)<br>N TIME |
|-------|--------------------|--------------------|-----------------------|-----------------------|
| SED   | 0.175              | 0.175              | 0.175                 | 0.175                 |

| TABLE | TRIDEMOR(3)<br>N TIME |
|-------|-----------------------|
| SED   | 0.175                 |

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

| STRATUM | DF | SE    | CV% |
|---------|----|-------|-----|
| WP      | 22 | 0.495 | 8.0 |

GRAIN MEAN DM% 89.0

PLOT AREA HARVESTED 0.00130