

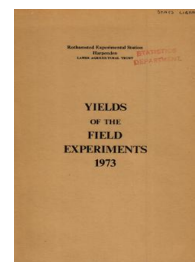
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RESEARCH

# Yields of the Field Experiments 1973

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## 73/R&bb/BS/2 - Varieties & N - Spring Barley

### Rothamsted Research

Rothamsted Research (1974) *73/R&bb/BS/2 - Varieties & N - Spring Barley* ; Yields Of The Field Experiments 1973, pp 320 - 323 - DOI: <https://doi.org/10.23637/ERADOC-1-98>

73/R/16/2 AND 73/N/29/2

# SPRING BARLEY

## VARIETIES AND N

Object: To study the yield of newer varieties of barley grown at a range of nitrogen levels - Rothamsted (R) Gt Harpenden II and Woburn (W) Horsepool Lane Close.

Sponsors: J.R. Moffatt, J.F. Jenkyn.

Design: 4 blocks of 11 plots, split into 3.

Whole plot dimensions: 4.27 x 24.7. Sub plot area harvested:  
Gt Harpenden II (R): 0.00163. Horsepool Lane Close (W): 0.00217.

Treatments: All combinations of:-

| Whole plots: 1. Varieties and Mildew control | VARIETY |
|----------------------------------------------|---------|
| Berac, sprayed tridemorph                    | BE-T    |
| Gerkm, sprayed tridemorph                    | GE-T    |
| Hassan, sprayed tridemorph                   | HA-T    |
| Julia, no mildew control                     | JU-C    |
| Julia, seed dressed ethirimol                | JU-E    |
| Julia, sprayed tridemorph                    | JU-T    |
| Lofa Abed, sprayed tridemorph                | LA-T    |
| Mazurka, sprayed tridemorph                  | MA-T    |
| Maris Mink, sprayed tridemorph               | MM-T    |
| Universe, sprayed tridemorph                 | UN-T    |
| Vada, sprayed tridemorph                     | VA-T    |

Tridemorph applied at 0.53 kg in 370 l.

| Sub plots: 2. Nitrogen fertiliser (kg N) | N   |
|------------------------------------------|-----|
| 38                                       | 38  |
| 75                                       | 75  |
| 113                                      | 113 |

Basal applications:

Gt Harpenden II (R): Manures: 310 kg (0:20:20) combine drilled.  
Weedkiller: MCPA, mecoprop and dicamba ('Tetralix plus' at 7.0 l in 220 l).

Horsepool Lane Close (W): Manures: Magnesian limestone at 7.5 tonnes, 310 kg (0:20:20) combine drilled: Weedkiller: Ioxynil at 0.53 kg and mecoprop at 1.6 kg in 280 l.

73/R/BS/2 AND 73/W/BS/2

Seed: Gt Harpenden II (R) and Horsepool Lane Close (W): Varieties sown at 160 kg.

Cultivations, etc.:-

Gt Harpenden II (R): Ploughed: 24 Nov, 1972. Seed sown: 16 Mar, 1973.  
F applied: 23 Mar. Weedkiller applied: 15 May. Tridemorph applied: 1 June. Combine harvested: 11 Aug. Previous crops: Spring beans 1971, barley 1972.

Horsepool Lane Close (W): Deep-tine cultivated: 1 Sept, 1972. Magnesian limestone applied: 18 Sept. Deep-tine cultivated: 26 Sept.  
Ploughed: 1 Jan, 1973. Power harrowed seed sown: 14 Mar.  
N applied: 19 Mar. Weedkiller applied: 11 May. Tridemorph applied: 1 June. Combine harvested: 10 Aug. Previous crops: Fallow 1971, barley 1972.

NOTE: Gt Harpenden II (R). Some of the grain was lost from one plot - treatment EE-T, N 38. An estimated value was used in the analysis.

Standard errors per plot. Grain: tonnes/hectare:

|                      |             |                |           |
|----------------------|-------------|----------------|-----------|
| Gt Harpenden II (R): | Whole plot: | 0.207 or 3.3%  | (30 d.f.) |
|                      | Sub plot:   | 0.221 or 3.6%  | (65 d.f.) |
| Horsepool (W):       | Whole plot: | 0.451 or 8.8%  | (30 d.f.) |
|                      | Sub plot:   | 0.638 or 12.5% | (66 d.f.) |

73/R/BS/2 AND 73/W/BS/2

TABLES OF MEANS

CRAIN: TONNES/HECTARE

GT HARPENDEN II (R)

VARIETY

|      | DE-T | GE-T | LA-T | JU-O | JU-E | JU-T | LA-T | MA-T | MI-T | UN-T | VA-T | Mean |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| N    |      |      |      |      |      |      |      |      |      |      |      |      |
| 38   | 6.41 | 5.96 | 6.65 | 5.51 | 6.16 | 6.31 | 5.77 | 5.83 | 7.58 | 7.68 | 5.73 | 6.33 |
| 75   | 6.51 | 5.95 | 6.68 | 5.25 | 6.06 | 6.19 | 5.46 | 5.89 | 7.61 | 7.41 | 5.89 | 6.27 |
| 113  | 6.13 | 5.67 | 6.20 | 5.12 | 6.03 | 6.19 | 5.39 | 5.71 | 6.97 | 6.95 | 6.08 | 6.04 |
| Mean | 6.35 | 5.86 | 6.51 | 5.29 | 6.09 | 6.23 | 5.54 | 5.81 | 7.39 | 7.35 | 5.90 | 6.21 |

STANDARD ERRORS OF DIFFERENCES

| N     | VARIETY | N       |
|-------|---------|---------|
|       |         | VARIETY |
| 0.047 | 0.147   | 0.194   |

Except when comparing means  
with same level of VARIETY: 0.156

Mean D.M. % 79.0

T3/R/BS/2 AND T3/W/BS/2

GRAIN: TONNES/HECTARE

HORSEPOOL LANE CROSE (W)

VARIETY

|      | BE-T | GE-T | HA-T | JU-O | JU-E | JU-F | LA-T | MA-T | MM-T | UN-T | VA-T | Mean |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| N    |      |      |      |      |      |      |      |      |      |      |      |      |
| 38   | 4.73 | 5.03 | 5.20 | 4.36 | 4.79 | 5.19 | 4.59 | 4.94 | 5.27 | 3.74 | 4.82 | 4.79 |
| 75   | 5.09 | 5.00 | 5.00 | 4.49 | 5.22 | 5.33 | 5.28 | 5.21 | 5.12 | 5.30 | 5.29 | 5.12 |
| 113  | 5.35 | 5.52 | 5.30 | 4.71 | 5.48 | 5.79 | 5.14 | 5.67 | 5.33 | 5.85 | 5.42 | 5.41 |
| Mean | 5.06 | 5.18 | 5.16 | 4.52 | 5.16 | 5.44 | 5.00 | 5.27 | 5.24 | 4.96 | 5.17 | 5.11 |

STANDARD ERRORS OF DIFFERENCES

| N     | VARIETY | N     | VARIETY |
|-------|---------|-------|---------|
| 0.136 | 0.319   | 0.488 |         |

Except when comparing means  
with same level of VARIETY: 0.451

Mean D.M. % 83.0