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# Yields of the Field Experiments 1981

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## 81/R/B/6 and 81/W/B/6 Varieties, N and Fungicide - S. Barley

### Rothamsted Research

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81/R/B/6 and 81/W/B/6

SPRING BARLEY

VARIETIES, N AND FUNGICIDE

Object: To study the yields of some of the newer varieties of s. barley; fungicides and nitrogen rates are also tested - Rothamsted (R), Gt. Knott III and Woburn (W), Horsepool Lane Close E.

Sponsor: R. Moffitt.

Design: 3 randomised blocks of 10 x 4 criss cross.

Column plot dimensions: Gt. Knott III (R): 3.0 x 27.1.  
Horsepool Lane Close E (W): 4.0 x 27.1.

Treatments: All combinations of:-

Column plots

| 1. VARIETY | Varieties and systemic fungicidal seed dressings:                                 |
|------------|---|
| ATEM       | Atem, no systemic seed dressing   |
| GEORG O    | Georgie, no systemic seed dressing  |
| GEORG E    | Georgie, dressed ethirimol  |
| GEORG T    | Georgie, dressed triadimenol plus fuberidazole                                    |
| GOLDMARK   | Goldmarker, no systemic seed dressing   |
| GO+KO+TR   | Goldmarker, Koru and Triumph seed mixed in equal parts, no systemic seed dressing |
| KORU       | Koru, no systemic seed dressing   |
| KYM        | Kym, no systemic seed dressing  |
| TRIUMPH    | Triumph, no systemic seed dressing  |
| TYRA       | Tyra, no systemic seed dressing   |

Row plots

| 2. N FUNG | Nitrogen fertiliser (kg N) and foliar fungicide: |
|-----------|--|
| 40        | 40   |
| 80        | 80   |
| 120       | 120  |
| 120+TRID  | 120 + tridemorph at 0.53 kg                      |

NOTE: Tridemorph was applied in 250 l on 30 May to Gt. Knott III (R); in 280 l on 1 June to Horsepool Lane Close (W).

Basal applications:

Gt. Knott III (R): Manures: (0:20:20) at 310 kg, combine drilled.  
Weedkillers: Glyphosate at 1.4 l in 250 l, dicamba with mecoprop and MCPA (as 'Banlene Plus' at 5 l) in 250 l.  
Horsepool Lane Close (W): Manures: (0:20:20) at 310 kg, broadcast.  
Weedkillers: Dicamba with mecoprop and MCPA (as 'Herrisol' at 4.9 l) in 280 l.

Seed: Gt. Knott III (R): Sown at 160 kg.  
Horsepool Lane Close (W): Sown at 160 kg.

81/R/B/6 and 81/W/B/6

Cultivations, etc.:-

Gt. Knott III (R): Glyphosate applied: 25 Sept, 1980. Ploughed: 25 Nov. Spring-tine cultivated twice: 9 Apr, 1981. Seed sown: 10 Apr. N applied: 16 Apr. 'Banlene Plus' applied: 30 May. Combine harvested: 3 Sept. Previous crops: W. oats 1979, w. barley 1980.

Horsepool Lane Close (W): Deep-tine cultivated twice: 5 Jan, 1980. Spring-tine cultivated: 9 Apr. PK applied, N applied, rotary cultivated: 13 Apr. Seed sown: 14 Apr. 'Herrisol' applied: 1 June. Combine harvested: 28 Aug. Previous crops: W. wheat 1979, potatoes 1980.

81/R/B/6 GT. KNOTT III (R)

GRAIN TONNES/HECTARE

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

| N FUNG VARIETY | 40   | 80   | 120  | 120+TRID | MEAN |
|----------------|------|------|------|----------|------|
| ATEM           | 5.07 | 5.30 | 6.01 | 6.31     | 5.67 |
| GEORG O        | 4.73 | 4.89 | 4.96 | 5.73     | 5.08 |
| GEORG E        | 4.65 | 5.24 | 5.15 | 5.77     | 5.20 |
| GEORG T        | 5.28 | 5.69 | 5.72 | 5.95     | 5.66 |
| GOLDMARK       | 5.14 | 5.66 | 5.09 | 5.97     | 5.47 |
| GO+KO+TR       | 4.93 | 6.20 | 6.06 | 6.45     | 5.91 |
| KORU           | 4.97 | 5.61 | 5.65 | 6.15     | 5.59 |
| KYM            | 5.37 | 5.53 | 5.98 | 5.86     | 5.68 |
| TRIUMPH        | 5.08 | 6.09 | 6.38 | 6.78     | 6.08 |
| TYRA           | 4.88 | 4.96 | 4.76 | 5.20     | 4.95 |
| MEAN           | 5.01 | 5.52 | 5.58 | 6.02     | 5.53 |

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

| TABLE  | VARIETY | N FUNG | VARIETY N FUNG |
|--|---------|--------|----------------|
| SED  | 0.218   | 0.177  | 0.353          |
| EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF: |         |        |                |
| VARIETY  |         |        | 0.308          |
| N FUNG   |         |        | 0.316          |

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

| STRATUM       | DF | SE    | CV% |
|---------------|----|-------|-----|
| BLOCK.WP1     | 18 | 0.267 | 4.8 |
| BLOCK.WP2     | 6  | 0.217 | 3.9 |
| BLOCK.WP1.WP2 | 54 | 0.324 | 5.9 |

GRAIN MEAN DM% 85.6

SUB PLOT AREA HARVESTED 0.00124

81/W/B/6 HORSEPOOL LANE CLOSE E (W)

GRAIN TONNES/HECTARE

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

| N FUNG VARIETY | 40   | 80   | 120  | 120+TRID | MEAN |
|----------------|------|------|------|----------|------|
| ATEM           | 5.18 | 5.15 | 6.11 | 5.97     | 5.60 |
| GEORG O        | 4.19 | 4.05 | 4.88 | 4.73     | 4.46 |
| GEORG E        | 3.20 | 3.48 | 4.17 | 4.21     | 3.77 |
| GEORG T        | 4.27 | 4.43 | 5.40 | 4.90     | 4.75 |
| GOLDMARK       | 4.33 | 5.13 | 5.92 | 5.46     | 5.21 |
| GO+KO+TR       | 4.24 | 4.69 | 5.70 | 5.34     | 4.99 |
| KORU           | 4.42 | 4.36 | 5.46 | 5.57     | 4.95 |
| KYM            | 4.81 | 5.07 | 5.89 | 5.92     | 5.42 |
| TRIUMPH        | 3.88 | 4.36 | 4.62 | 5.16     | 4.50 |
| TYRA           | 4.78 | 4.34 | 5.70 | 5.30     | 5.03 |
| MEAN           | 4.33 | 4.51 | 5.39 | 5.26     | 4.87 |

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

| TABLE  | VARIETY | N FUNG | VARIETY N FUNG |
|--|---------|--------|----------------|
| SED  | 0.496   | 0.402  | 0.734          |
| EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF: |         |        |                |
| VARIETY  |         |        | 0.585          |
| N FUNG   |         |        | 0.630          |

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

| STRATUM       | DF | SE    | CV%  |
|---------------|----|-------|------|
| BLOCK.WP1     | 18 | 0.608 | 12.5 |
| BLOCK.WP2     | 6  | 0.492 | 10.1 |
| BLOCK.WP1.WP2 | 54 | 0.549 | 11.3 |

GRAIN MEAN DM% 82.5

SUB PLOT AREA HARVESTED 0.00168