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# Yields of the Field Experiments 1972

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## 72/R/B/2 and 72/W/B/2 Barley Varieties and N

### Rothamsted Research

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72/R/B/2 and 72/W/B/2

BARLEY

VARIETIES AND N

Object: To study the yield of newer varieties of barley grown at a range of nitrogen levels - Rothamsted (R) Pastures and Woburn (W) Lansome III.

Sponsor: J.R. Moffatt.

Design: 4 randomised blocks of 6 plots, split into 3.

Whole plot dimensions: 4.27 x 24.7. Sub plot area harvested: 0.00217.

Treatments: All combinations of:-

Whole plots: 1. Varieties: Berac (BE), Gerkra (GE), Hassan (HA), Julia (JU), Mazurka (MA), Vada (VA).

Sub plots: 2. Levels of nitrogen: 38, 75, 113 kg N as 'Nitro-Chalk'.

Basal applications:

Pastures (R): 310 kg (0:20:20) combine drilled. Weedkillers: Paraquat at 0.56 kg ion in 225 l on 2 occasions. Ioxynil, bromoxynil, 2,4-DP and MCPA ('Tetroxone' at 5.6 l in 220 l).  
Lansome III (W): 250 kg (0:20:20) combine drilled. Weedkiller: Ioxynil, bromoxynil, 2,4-DP and MCPA ('Tetroxone' at 5.6 l in 280 l).

Seed: Gerkra dressed with organomercury and ethirimol, remainder with dual purpose and ethirimol. Sown at 160 kg (R), 150 kg (W).

Cultivations, etc.:-

Pastures (R): Paraquat applied: 2 and 6 Oct, 1971. Ploughed: 18 Nov. Seed combine drilled: 17 Mar, 1972. N applied: 7 - 13 Apr. 'Tetroxone' applied: 8 May. Combine harvested: 22 Aug. Previous crops: Spring beans 1970, barley 1971.  
Lansome III (W): Ploughed: 27 Sept, 1971. Deep-tine cultivated: 10 Nov. Seed combine drilled: 16 Mar, 1972. N applied: 17 Mar. 'Tetroxone' applied: 8 May. Combine harvested: 14 Aug. Previous crops: Spring beans 1970, barley 1971.

72/R/B/2 and 72/W/B/2

Standard errors per plot. Grain, tonnes/hectare:

Pastures (R): Whole plot: 0.248 or 3.9% (15 d.f.)  
 Sub plot: 1.050 or 16.5% (36 d.f.)  
 Lansome III (W): Whole plot: 0.285 or 5.7% (15 d.f.)  
 Sub plot: 0.679 or 13.6% (36 d.f.)

TABLES OF MEANS

GRAIN: TONNES/HECTARE

PASTURES (R)

N: KG/HA

|         | 38   | 75   | 113  | Mean |
|---------|------|------|------|------|
| VARIETY |      |      |      |      |
| BE      | 6.80 | 7.04 | 6.29 | 6.71 |
| GE      | 5.72 | 6.04 | 5.26 | 5.67 |
| HA      | 7.80 | 6.63 | 6.23 | 6.89 |
| JU      | 6.57 | 7.51 | 6.69 | 6.92 |
| MA      | 6.63 | 5.70 | 5.12 | 5.82 |
| VA      | 7.31 | 5.59 | 5.36 | 6.09 |
| Mean    | 6.81 | 6.42 | 5.83 | 6.35 |

STANDARD ERRORS OF DIFFERENCES

| VARIETY | N     | VARIETY | N     |
|---------|-------|---------|-------|
|         | 0.176 | 0.303   | 0.631 |
|         |       |         | 0.743 |

Unless same levels of  
 VARIETY

Mean D.M. %: 85.2

72/R/B/2 and 72/W/B/2

GRAIN: TONNES/HECTARE

LANSOME III (W)

N: KG/HA

|         | 38   | 75   | 113  | Mean |
|---------|------|------|------|------|
| VARIETY |      |      |      |      |
| BE      | 4.15 | 5.40 | 5.65 | 5.07 |
| GE      | 4.10 | 5.26 | 5.45 | 4.94 |
| HA      | 3.45 | 5.62 | 5.50 | 4.86 |
| JU      | 3.80 | 5.29 | 6.08 | 5.06 |
| MA      | 3.43 | 5.24 | 5.85 | 4.84 |
| VA      | 4.12 | 5.25 | 5.89 | 5.09 |
| Mean    | 3.84 | 5.34 | 5.74 | 4.97 |

STANDARD ERRORS OF DIFFERENCES

| VARIETY | N | VARIETY | N |
|---------|---|---------|---|
|---------|---|---------|---|

|       |       |       |
|-------|-------|-------|
| 0.202 | 0.196 | 0.441 |
|-------|-------|-------|

Unless same levels of VARIETY 0.480

Mean D.M. %: 85.8