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Yields of the Field Experiments 1987

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87/R/WW/1 Varieties - W. Wheat

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87/R/WW/1

WINTER WHEAT

VARIETIES

Object: To study a selection of newer varieties of w. wheat on land in rotation (pathogen free) and after wheat (pathogen infected) - Great Knott I (pathogen free RH) and Highfield VI (pathogen infected RD).

Sponsors: R. Moffitt, R.J. Gutteridge.

Design: Two randomised blocks of 2 whole plots split into (RH) 11, (RD) 13.

Sub plot dimensions: 3.0 x 12.0.

Treatments: All combinations of:-

Whole plots

| | |
|-------------|---|
| 1. INSCTCDE | Insecticide: |
| NONE | None |
| PIRIMICA | Pirimicarb at 0.14 kg in 200 l on 23 June, 1987 |

Sub plots

| | |
|------------|--------------------------------------|
| 2. VARIETY | Varieties: |
| AVALON | Avalon (on RH only) |
| AVALON A | Avalon (grown after Avalon, RD only) |
| AVALON N | Avalon (grown after Norman, RD only) |
| BRIMSTON | Brimstone |
| FORTRESS | Fortress |
| GALAHAD | Galahad |
| HORNET | Hornet |
| MERCIA | Mercia |
| MISSION | Mission |
| NORMAN | Norman (on RH only) |
| NORMAN A | Norman (grown after Avalon, RD only) |
| NORMAN N | Norman (grown after Norman, RD only) |
| PARADE | Parade |
| RAPIER | Rapier |
| RENDEZVO | Rendezvous |

NOTES: (1) A planned test of urea was not applied.
(2) A further experiment on a pathogen free site at Woburn was not sown because of unsuitable conditions.

Basal applications:

Great Knott I (RH): Manures: 'Nitram' at 380 kg. Weedkillers: Clopyralid at 0.07 kg and bromoxynil at 0.34 kg with mecoprop at 2.5 kg in 200 l. Fungicides: Propiconazole at 0.25 kg with tridemorph at 0.19 kg in 200 l.

Highfield VI (RD): Manures: 'Nitram' at 590 kg. Weedkillers: Isoproturon at 2.5 kg with clopyralid at 0.07 kg, bromoxynil at 0.34 kg and mecoprop at 2.5 kg in 200 l. Fungicides: Prochloraz at 0.40 kg and carbendazim at 0.15 kg in 200 l. Propiconazole at 0.12 kg with carbendazim at 0.25 kg and maneb at 1.5 kg in 200 l.

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Seed: Varieties sown at 190 kg on both sites.

Cultivations, etc.:-

Great Knott I (RH): Heavy spring-tine cultivated: 17 Oct, 1986.
 Rotary harrowed, seed sown: 30 Oct. N applied: 16 Apr, 1987.
 Weedkillers applied: 6 May. Fungicides applied: 29 June. Combine harvested: 31 Aug. Previous crops: S. beans 1985, potatoes 1986.
 Highfield VI (RD): Ploughed: 1 Oct, 1986. Disced twice: 14 Oct.
 Rotary harrowed, seed sown: 17 Oct. N applied, weedkillers applied: 15 Apr, 1987. Prochloraz and carbendazim applied: 5 May. Propiconazole, carbendazim and maneb applied: 29 June. Combine harvested: 1 Sept. Previous crops: Potatoes 1985, w. wheat 1986.

NOTES: (1) Foot and roots rots were assessed in June on Highfield VI (RD).
 (2) One plot with treatment combination BRIMSTON NONE on the Highfield site was treated as missing because of severe lodging. An estimated value was used in the analysis.

87/R/WW/1 GREAT KNOTT I (RH)

GRAIN TONNES/HECTARE

***** Tables of means *****

| INSCTCDE VARIETY | NONE | PIRIMICA | Mean |
|---------------------|------|----------|------|
| AVALON | 8.35 | 7.75 | 8.05 |
| BRIMSTON | 9.44 | 9.51 | 9.47 |
| FORTRESS | 8.89 | 9.25 | 9.07 |
| GALAHAD | 9.06 | 9.29 | 9.17 |
| HORNET | 9.41 | 9.62 | 9.52 |
| MERCIA | 8.75 | 9.04 | 8.89 |
| MISSION | 8.20 | 8.15 | 8.17 |
| NORMAN | 8.27 | 8.61 | 8.44 |
| PARADE | 8.95 | 8.98 | 8.97 |
| RAPIER | 9.37 | 9.64 | 9.51 |
| RONDEZVO | 9.07 | 9.43 | 9.25 |
| Mean | 8.89 | 9.02 | 8.96 |

*** Standard errors of differences of means ***

| Table | VARIETY | INSCTCDE* VARIETY |
|--------|---------|----------------------|
| s.e.d. | 0.148 | 0.209 |

* Within the same level of INSCTCDE only

***** Stratum standard errors and coefficients of variation *****

| Stratum | d.f. | s.e. | cv% |
|---------------------|---------|-------|-----|
| BLOCK.WP | 20 | 0.209 | 2.3 |
| GRAIN MEAN DM% | 81.8 | | |
| PLOT AREA HARVESTED | 0.00245 | | |

87/R/WW/1 HIGHFIELD (RD)

GRAIN TONNES/HECTARE

***** Tables of means *****

| INSCTCDE VARIETY | NONE | PIRIMICA | Mean |
|---------------------|------|----------|------|
| AVALON A | 7.82 | 8.00 | 7.91 |
| AVALON N | 7.87 | 8.13 | 8.00 |
| BRIMSTON | 5.52 | 8.34 | 6.93 |
| FORTRESS | 8.49 | 8.93 | 8.71 |
| GALAHAD | 8.95 | 8.93 | 8.94 |
| HORNET | 9.05 | 9.36 | 9.20 |
| MERCIA | 8.37 | 8.64 | 8.51 |
| MISSION | 7.05 | 7.07 | 7.06 |
| NORMAN A | 8.52 | 8.55 | 8.53 |
| NORMAN N | 8.16 | 8.51 | 8.34 |
| PARADE | 8.42 | 8.98 | 8.70 |
| RAPIER | 7.89 | 8.13 | 8.01 |
| RONDEZVO | 7.62 | 8.53 | 8.08 |
| Mean | 7.98 | 8.47 | 8.22 |

*** Standard errors of differences of means ***

| Table | VARIETY | INSCTCDE* VARIETY |
|--------|---------|----------------------|
| s.e.d. | 0.342 | 0.483 |

* Within the same level of INSCTCDE

***** Stratum standard errors and coefficients of variation *****

| Stratum | d.f. | s.e. | cv% |
|----------|------|-------|-----|
| BLOCK.WP | 23 | 0.483 | 5.9 |

GRAIN MEAN DM% 82.8

PLOT AREA HARVESTED 0.00244