



Yields of the Field Experiments 1987

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

Rothamsted Research

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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	NONE	PIRIMICA	Mean
VARIETY			
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*
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