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86/R/WW/1 and 86/W/WW/1 Varieties - W. Wheat

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86/R/WW/1 and 86/W/WW/1

WINTER WHEAT

VARIETIES

Object: To study a selection of newer varieties of w. wheat and one variety of triticale and rye, on land in rotation (pathogen free) and after wheat (pathogen infected) - Rothamsted Highfield VI (pathogen free RH) and Sawyers I (pathogen infected RD), Woburn Far Field II (pathogen free WH).

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

Design: A randomised block of 4 whole plots split into (RH, RD) 13, (WH) 11.

Sub plot dimensions: (RH, RD) 3.0 x 12.0, (WH) 4.0 x 12.0.

Treatments: All combinations of:-

Whole plots

- | | |
|----------------|--------------------------------|
| 1. FOLIAR N | Foliar nitrogen application: |
| NONE | None |
| UREA | N at 40 kg as urea |
| 2. INSECTICIDE | Insecticide: |
| NONE | None |
| PIRIMICARB | Pirimicarb at 0.14 kg in 250 l |

Sub plots

- | | |
|------------|--|
| 3. VARIETY | Varieties: |
| AMBASSAD | Ambassador |
| ANIMO | Animo (Rye, WH only) |
| AVALON | Avalon (on RH and WH only, duplicated on RH) |
| AVALON A | Avalon (grown after Avalon, RD only) |
| AVALON N | Avalon (grown after Norman, RD only) |
| BRIMSTON | Brimstone |
| CORINTHI | Corinthian (RD only) |
| GALAHAD | Galahad |
| LASKO | Lasko (Triticale, RH and WH only) |
| LONGBOW | Longbow |
| MISSION | Mission |
| MOULIN | Moulin |
| NORMAN | Norman (on RH only, duplicated) |
| NORMAN A | Norman (grown after Avalon, RD only) |
| NORMAN N | Norman (grown after Norman, RD only) |
| RAPIER | Rapier |
| SLEJPNER | Slejpner |

Basal applications:

Highfield VI (RH): Manures: N at 125 kg as 'Nitram'. Weedkillers: Clopyralid at 0.07 kg with bromoxynil octanoate at 0.34 kg and mecoprop at 2.5 kg and isoproturon at 2.1 kg in 200 l. Glyphosate at 1.4 kg in 200 l. Fungicide: Propiconazole at 0.12 kg in 200 l.

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Sawyers I (RD): Manures: (0:18:36) at 690 kg. N at 190 kg as 'Nitram'. Weedkillers: Clopyralid at 0.05 kg with bromoxynil octanoate at 0.24 kg and mecoprop at 2.0 kg and isoproturon at 2.1 kg applied with the prochloraz and carbendazim in 200 l. Fungicides: Prochloraz at 0.40 kg with carbendazim at 0.15 kg. Propiconazole at 0.12 kg in 200 l.

Far Field II (WH): Manures: N at 130 kg as 'Nitram'. Weedkillers: Clopyralid at 0.07 kg with bromoxynil octanoate at 0.34 kg and mecoprop at 2.1 kg and isoproturon at 1.5 kg in 250 l. Fungicide: Propiconazole at 0.12 kg in 240 l.

Seed: Highfield VI (RH), Sawyers I (RD), Far Field II (WH): Varieties sown at 190 kg.

Cultivations, etc.:-

Highfield VI (RH): Heavy spring-tine cultivated twice, rotary harrowed, seed sown: 25 Oct, 1985. N applied: 29 Apr, 1986. Clopyralid, bromoxynil octanoate, mecoprop and isoproturon applied: 30 Apr. Fungicide applied: 27 June. Foliar N treatment applied: 14 July. Insecticide treatment applied: 16 July. Glyphosate applied: 12 Aug. Combine harvested: 30 Aug. Previous crops: S. beans 1984, potatoes 1985.

Sawyers I (RD): PK applied: 7 Oct, 1985. Ploughed: 8 Oct. Rolled, disced, spring-tine cultivated: 23 Oct. Rotary harrowed, seed sown: 24 Oct. N applied: 28 Apr, 1986. Weedkillers, prochloraz and carbendazim applied: 6 May. Propiconazole applied: 26 June. Foliar N treatment applied: 14 July. Insecticide treatment applied: 16 July. Combine harvested: 30 Aug. Previous crops: S. beans 1984, w. wheat 1985.

Far Field II (WH): Spring-tine cultivated: 29 Oct, 1985. Harrowed: 30 Oct. Seed sown: 31 Oct. N applied: 25 Apr, 1986. Weedkillers applied: 2 May. Fungicide applied: 25 June. Foliar N and insecticide treatments applied: 16 July. Combine harvested: 2 Sept. Previous crops: W. oats 1984, potatoes 1985.

NOTE: Take-all was assessed on Sawyers I (RD).

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HIGHFIELD VI (R) HEALTHY

GRAIN TONNES/HECTARE

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

FOLIAR N VARIETY	NONE	UREA	MEAN
AMBASSAD	11.08	11.41	11.25
AVALON	10.77	10.59	10.68
BRIMSTON	11.33	10.93	11.13
GALAHAD	10.77	10.41	10.59
LASKO	9.61	8.45	9.03
LONGBOW	11.01	10.67	10.84
MISSION	9.68	10.87	10.28
MOULIN	10.64	10.16	10.40
NORMAN	10.97	10.82	10.90
RAPIER	9.64	10.13	9.88
SLEJPNER	11.33	10.99	11.16
MEAN	10.66	10.53	10.59

INSC TCDE VARIETY	NONE	PIRIMICA	MEAN
AMBASSAD	11.30	11.19	11.25
AVALON	10.76	10.60	10.68
BRIMSTON	11.36	10.91	11.13
GALAHAD	10.91	10.28	10.59
LASKO	9.43	8.63	9.03
LONGBOW	11.03	10.65	10.84
MISSION	10.24	10.31	10.28
MOULIN	10.29	10.51	10.40
NORMAN	11.08	10.71	10.90
RAPIER	9.96	9.80	9.88
SLEJPNER	11.16	11.15	11.16
MEAN	10.72	10.47	10.59

INSC TCDE FOLIAR N	NONE	PIRIMICA	MEAN
NONE	10.59	10.73	10.66
UREA	10.85	10.20	10.53
MEAN	10.72	10.47	10.59

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HIGHFIELD VI (R) HEALTHY

GRAIN TONNES/HECTARE

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

VARIETY	INSCTCDE FOLIAR N	NONE	PIRIMICA
AMBASSAD	NONE	10.80	11.37
	UREA	11.81	11.01
AVALON	NONE	10.90	10.63
	UREA	10.61	10.57
BRIMSTON	NONE	11.61	11.06
	UREA	11.10	10.76
GALAHAD	NONE	10.65	10.90
	UREA	11.17	9.65
LASKO	NONE	9.49	9.73
	UREA	9.37	7.53
LONGBOW	NONE	11.40	10.61
	UREA	10.66	10.68
MISSION	NONE	9.30	10.07
	UREA	11.19	10.55
MOULIN	NONE	10.43	10.84
	UREA	10.15	10.18
NORMAN	NONE	10.80	11.14
	UREA	11.36	10.29
RAPIER	NONE	9.55	9.73
	UREA	10.38	9.87
SLEJPNER	NONE	11.03	11.62
	UREA	11.29	10.69

GRAIN MEAN DM% 78.5

PLOT AREA HARVESTED 0.00245

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SAWYER I (R) DISEASED

GRAIN TONNES/HECTARE

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

FOLIAR N VARIETY	NONE	UREA	MEAN
AMBASSAD	8.94	9.09	9.01
AVALON A	8.48	9.37	8.92
AVALON N	8.65	9.18	8.92
BRIMSTON	8.90	9.74	9.32
CORINTHI	8.33	8.71	8.52
GALAHAD	8.69	8.97	8.83
LONGBOW	9.09	9.61	9.35
MISSION	7.97	9.20	8.58
MOULIN	8.46	8.84	8.65
NORMAN A	9.58	9.46	9.52
NORMAN N	8.63	9.21	8.92
RAPIER	8.77	9.02	8.90
SLEJPNER	9.66	9.09	9.37

MEAN	8.78	9.19	8.99
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INSCCTDE VARIETY	NONE	PIRIMICA	MEAN
AMBASSAD	8.72	9.31	9.01
AVALON A	9.06	8.78	8.92
AVALON N	9.09	8.74	8.92
BRIMSTON	9.59	9.05	9.32
CORINTHI	8.89	8.15	8.52
GALAHAD	8.99	8.66	8.83
LONGBOW	9.45	9.25	9.35
MISSION	8.31	8.85	8.58
MOULIN	8.70	8.61	8.65
NORMAN A	9.47	9.57	9.52
NORMAN N	9.15	8.69	8.92
RAPIER	8.65	9.15	8.90
SLEJPNER	9.36	9.39	9.37

MEAN	9.03	8.94	8.99
------	------	------	------

INSCCTDE FOLIAR N	NONE	PIRIMICA	MEAN
NONE	8.82	8.74	8.78
UREA	9.25	9.14	9.19
MEAN	9.03	8.94	8.99

86/R/WW/1

SAWYERS I (R) DISEASED

GRAIN TONNES/HECTARE

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

VARIETY	INSCTCDE FOLIAR N	NONE	PIRIMICA
AMBASSAD	NONE	8.82	9.06
	UREA	8.62	9.55
AVALON A	NONE	8.78	8.17
	UREA	9.35	9.39
AVALON N	NONE	8.82	8.49
	UREA	9.36	9.00
BRIMSTON	NONE	9.51	8.29
	UREA	9.67	9.81
CORINTHI	NONE	8.66	8.00
	UREA	9.11	8.31
GALAHAD	NONE	8.82	8.55
	UREA	9.15	8.78
LONGBOW	NONE	9.29	8.90
	UREA	9.61	9.60
MISSION	NONE	7.49	8.45
	UREA	9.14	9.25
MOULIN	NONE	8.65	8.28
	UREA	8.75	8.94
NORMAN A	NONE	9.55	9.61
	UREA	9.40	9.52
NORMAN N	NONE	8.57	8.70
	UREA	9.73	8.68
RAPIER	NONE	8.14	9.41
	UREA	9.16	8.89
SLEJPNER	NONE	9.58	9.74
	UREA	9.13	9.04

GRAIN MEAN DM% 80.7

PLOT AREA HARVESTED 0.00244

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WOBURN (FAR FIELD II) (W)

GRAIN TONNES/HECTARE

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

FOLIAR N VARIETY	NONE	UREA	MEAN
AMBASSAD	7.88	8.29	8.08
ANIMO	7.59	6.90	7.24
AVALON	8.02	7.66	7.84
BRIMSTON	7.44	7.87	7.65
GALAHAD	7.67	7.48	7.58
LASKO	7.82	7.28	7.55
LONGBOW	7.55	7.50	7.53
MISSION	7.50	8.53	8.01
MOULIN	7.78	7.80	7.79
RAPIER	7.61	6.63	7.12
SLEJPNER	8.36	8.64	8.50
MEAN	7.75	7.69	7.72

INSC TCDE VARIETY	NONE	PIRIMICA	MEAN
AMBASSAD	8.21	7.96	8.08
ANIMO	6.99	7.49	7.24
AVALON	7.51	8.17	7.84
BRIMSTON	7.86	7.45	7.65
GALAHAD	7.53	7.62	7.58
LASKO	7.65	7.45	7.55
LONGBOW	7.36	7.69	7.53
MISSION	8.24	7.79	8.01
MOULIN	8.28	7.30	7.79
RAPIER	7.55	6.69	7.12
SLEJPNER	8.39	8.61	8.50
MEAN	7.78	7.66	7.72

INSC TCDE FOLIAR N	NONE	PIRIMICA	MEAN
NONE	7.82	7.67	7.75
UREA	7.74	7.64	7.69
MEAN	7.78	7.66	7.72

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WOBURN (FAR FIELD II) (W)

GRAIN TONNES/HECTARE

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

VARIETY	INSCTCDE FOLIAR N	NONE	PIRIMICA
AMBASSAD	NONE	7.92	7.84
	UREA	8.50	8.08
ANIMO	NONE	7.59	7.58
	UREA	6.39	7.41
AVALON	NONE	7.86	8.19
	UREA	7.16	8.16
BRIMSTON	NONE	7.67	7.20
	UREA	8.05	7.70
GALAHAD	NONE	7.44	7.90
	UREA	7.62	7.34
LASKO	NONE	7.91	7.73
	UREA	7.39	7.16
LONGBOW	NONE	7.19	7.92
	UREA	7.54	7.47
MISSION	NONE	7.62	7.37
	UREA	8.86	8.21
MOULIN	NONE	8.51	7.04
	UREA	8.04	7.56
RAPIER	NONE	8.09	7.13
	UREA	7.02	6.24
SLEJPNER	NONE	8.23	8.49
	UREA	8.55	8.73

GRAIN MEAN DM% 84.0

PLOT AREA HARVESTED 0.00330