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90/R/WW/9 Foliar Potassium Nitrate - W. Wheat

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90/R/WW/9

WINTER WHEAT

FOLIAR POTASSIUM NITRATE

Object: To study the effects of foliar applications of potassium nitrate and urea on the yield and nutrient composition of w. wheat - Great Harpenden II.

Sponsor: P.B. Barraclough.

Design: 5 randomised blocks of 8 plots.

Whole plot dimensions: 3.0 x 15.0.

Treatments:

FOLIAR N	Foliar nitrogen; all applications were divided equally and applied on two successive days:
NONE	None
K20E	20 kg K as potassium nitrate at GS 41 on 16 and 17 May, 1990
K20EU40E	" " " " " " plus 40 kg N as urea on 16 and 17 May
U40E	40 kg N as urea on 16 and 17 May
K5M	5 kg K as potassium nitrate at GS 55 on 26 and 27 May
K20M	20 kg K " " " " " " 26 and 27 May
K20EK20M	" " " " " " on 16 and 17 May repeated on 26 and 27 May
K20MK20L	" " " " " " on 26 and 27 May repeated GS 71 on 13 and 14 June

NOTE: All plots received N at 131 kg as 'Nitram' applied on 12 Apr, 1990.

Basal applications: Weedkillers: Bromoxynil at 0.19 kg and ioxynil at 0.19 kg with metsulfuron-methyl at 6.0 g in 200 l. Fungicides: Chlorothalonil at 0.50 kg with propiconazole at 0.12 kg in 200 l. Tridemorph at 0.52 kg in 200 l.

Seed: Mercia, sown at 180 kg.

Cultivations, etc.:- Heavy spring-tine cultivated twice: 16 Oct, 1989. Deep-tine cultivated with vibrating tines, disced, rotary harrowed, seed sown: 17 Oct. Weedkillers applied: 24 Apr, 1990. Chlorothalonil with propiconazole applied: 27 May. Tridemorph applied: 26 June. Combine harvested: 7 Aug. Previous crops: W. barley 1988, potatoes 1989.

NOTES: (1) Leaf samples were taken approximately five days after foliar treatment applications to measure N and K contents.
(2) Components of yield were measured.

90/R/WW/9

GRAIN TONNES/HECTARE

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

FOLIAR N

NONE	9.98
K20E	10.29
K20EU40E	10.05
U40E	9.94
K5M	10.26
K20M	10.15
K20EK20M	10.10
K20MK20L	9.92

Mean 10.09

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

FOLIAR N

0.226

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	28	0.358	3.5

GRAIN MEAN DM% 90.4

STRAW TONNES/HECTARE

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

FOLIAR N

NONE	6.97
K20E	7.07
K20EU40E	6.60
U40E	6.27
K5M	6.82
K20M	6.89
K20EK20M	6.54
K20MK20L	6.45

Mean 6.70

STRAW MEAN DM% 87.2

PLOT AREA HARVESTED 0.00230