

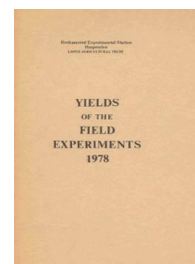
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78/R/CS/206 Late N - Wheat

Rothamsted Research

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78/R/CS/206

LATE N

Object: To study the residual effects on wheat of a range of fertilisers applied to potatoes in 1977 - Great Knott II.

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The second year, wheat.

For first year see 77/R/CS/206.

Design: 3 randomised blocks of 18 plots.

Whole plot dimensions: 4.27 x 13.1.

Treatments: All combinations of:-

1. N FORM(77) Forms of nitrogen fertiliser in 1977:
 - AA Aqueous ammonia, injected before planting
 - AA+NITRA Aqueous ammonia + nitrapyrin ('N-Serve') at 1 kg, injected before planting
 - AA+STC Aqueous ammonia + sodium trithiocarbonate at 42 kg injected before planting
 - IB SMALL IBDU (isobutylidene diurea), small granules to seedbed
 - IB LARGE IBDU, large granules to seedbed
 - AN E+L Ammonium nitrate, half in seedbed, half top-dressed
 - AN E Ammonium nitrate, all in seedbed

2. N RATE(1) Rates of nitrogen fertiliser in 1977 (kg N):

200
300

plus four extra treatments given ammonium nitrate, all in the seedbed in 1977 (kg N):

N RATE(2)

AN E 150
AN E 250
AN E 350
AN E 400

NOTES: (1) The intended rate of sodium trithiocarbonate was 24 kg. Only one plot, treatment N RATE(1)200, received this rate, all other plots received 42 kg.

(2) Aqueous ammonia and inhibitors were injected, 10 cm deep with tines 30 cm apart.

Basal applications: Manures: (0:20:20) at 310 kg, combine drilled. 'Nitra-Shell 34' at 240 kg. Weedkillers: Dicamba with mecoprop and MCPA ('Banlene Plus' at 4.9 l in 220 l). Growth regulator: Chlormequat at 1.4 kg in 220 l.

Seed: Atou, sown at 210 kg.

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Cultivations, etc.:— Heavy spring-tine cultivated twice: 7 and 8 Nov, 1977. Seed sown: 15 Nov. N applied: 19 Apr, 1978. Weedkiller and growth regulator applied: 10 May. Combine harvested: 12 Sept.

NOTE: Crop samples were taken for N determinations.

GRAIN TONNES/HECTARE

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

N RATE(1) N FORM(77)	200	300	MEAN
AA	5.01	5.69	5.35
AA+NITRA	5.26	5.89	5.57
AA+STC	5.41	5.96	5.69
IB SMALL	5.51	5.78	5.65
IB LARGE	5.63	5.90	5.76
AN E+L	5.91	5.99	5.95
AN E	5.33	5.79	5.56
MEAN	5.44	5.86	5.65

N RATE(2)	AN E 150	AN E 250	AN E 350	AN E 400	MEAN
	5.00	5.61	5.49	6.01	5.53

GRAND MEAN 5.62

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	N RATE(2)	N FORM(77)	N RATE(1)	N FORM(77) N RATE(1) & RATE(2)
SED	0.263	0.186	0.099	0.263

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	34	0.322	5.7
PLOT AREA HARVESTED	0.00279		