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Yields of the Field Experiments 1980

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80/W/CS/239 Late N

Rothamsted Research

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80/W/CS/239

LATE N

Object: To study the residual effects on w. wheat of a range of fertilisers applied to potatoes in 1979 - Woburn, Horsepool.

Sponsors: F.V. Widdowson, A. Penny, J. Ashworth, T.M. Addiscott.

The second year, w. wheat.

Design: 3 randomised blocks of 16 plots.

Whole plot dimensions: 4.27 x 9.14.

Treatments: All combinations of:-

1. N FORM(79) Forms of nitrogen fertiliser in 1979:

AQ U	Aqueous urea, injected before planting
AQ U+CS2	Aqueous urea + carbon disulphide at 10.0 kg, injected before planting
AQ U+NIT	Aqueous urea + nitrapyrin at 1.0 kg, injected before planting
NC E	'Nitro-Chalk', all to the seedbed
NC E+L	'Nitro-Chalk', half to the seedbed, half in June
IBDU	Isobutylidene diurea, all to the seedbed

2. N RATE(1) Rates of nitrogen fertiliser in 1979 (kg N):

200
300

plus four extra treatments all given 'Nitro-Chalk' in 1979:

EXTRA

NC E100	At 100 kg N, all to the seedbed
NC E400	At 400 kg N, all to the seedbed
NC EL100	At 100 kg N, half to the seedbed, half in June
NC EL400	At 400 kg N, half to the seedbed, half in June

Basal applications: Manures: (0:20:20) at 310 kg, combine drilled.
'Nitro-Chalk' at 380 kg. Weedkillers: Mecoprop, bromoxynil and ioxynil ('Brittox' at 3.5 l in 250 l). Growth regulator: Chlormequat at 1.4 l in 280 l.

Seed: Flanders, sown at 190 kg.

Cultivations, etc.: Heavy spring-tine cultivated: 17 Oct, 1979. Spring-tine cultivated with crumbler attached, seed sown: 18 Oct. Weedkillers applied: 5 Apr, 1980. N applied: 6 Apr. Growth regulator applied: 24 Apr. Combine harvested: 27 Aug.

NOTE: N content of grain was measured.

80/W/CS/239

GRAIN DRY MATTER TONNES/HECTARE

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

N RATE(1)	200	300	MEAN
N FORM(79)			
AQ U	7.57	7.19	7.38
AQ U+CS2	7.37	7.28	7.33
AQ U+NIT	7.53	7.35	7.44
NC E	7.41	6.92	7.17
NC E+L	7.29	7.56	7.42
IBDU	6.57	7.66	7.11
MEAN	7.29	7.33	7.31

EXTRA	NC E100	NC E400	NC EL100	NC EL400	MEAN
	7.28	7.52	6.78	7.46	7.26

GRAND MEAN 7.30

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

TABLE	N FORM(79)	N RATE(1)	EXTRA	N FORM(79) N RATE(1) & EXTRA
SED	0.233	0.134	0.329	0.329

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

STRATUM	DF	SE	CV%
BLOCK.WP	30	0.403	5.5

GRAIN MEAN DM% 84.7

PLOT AREA HARVESTED 0.00279