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94/W/RAW/3 Sulphur and Nitrogen - W. Oilseed Rape

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94/W/RAW/3

WINTER OILSEED RAPE

SULPHUR AND NITROGEN

Object: To determine the effects of various rates of sulphur fertilizer on the yield and sulphur content of winter oilseed rape grown at various rates of nitrogen fertilizer - Woburn, Butt Close.

Sponsors: S.P. McGrath, F. Zhao, G.F.J. Milford.

Design: 4 randomised blocks of 3 x 4 plots.

Whole plot dimensions: 4.0 x 10.0.

Treatments: All combinations of:-

- | | |
|-------------|---|
| 1. NITROGEN | Fertilizer nitrogen (kg N), as Nitro-Chalk: |
| N1 | 100 |
| N2 | 180 |
| N3 | 230 |
| 2. SULPHUR | Fertilizer sulphur (kg S), as gypsum (17.6% S): |
| S0 | 0 |
| S1 | 10 |
| S2 | 20 |
| S4 | 40 |

Experimental diary:

23-Aug-93 : B : Ploughed.
24-Aug-93 : B : Rolled.
07-Sep-93 : B : Rotary harrowed, Libravo, dressed Lindex-Plus FS, drilled at 7.0 kg.
30-Sep-93 : B : 27% N at 50 kg.
10-Feb-94 : B : Carbetamex at 2.0 kg with Benazalox at 1.25 kg in 200 l.
04-Mar-94 : T : NITROGEN N1, N2, N3: 27% N at 185.2, 333.2 and 426.0 kg respectively.
10-Mar-94 : T : SULPHUR S1, S2, S4: Gypsum at 56.8, 113.8 and 227.2 kg respectively.
08-Apr-94 : T : NITROGEN N1, N2, N3: 27% N at 185.2, 333.2 and 426.0 kg respectively.
05-Aug-94 : B : Combine harvested.

Previous crops: W. rape, summer fallow 1992, w. wheat 1993.

NOTE: Plants were sampled throughout the season for sulphur and nitrogen content, soil was also sampled pre-sowing and post-harvest for sulphur content.

94/W/RAW/3

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

SULPHUR NITROGEN	S0	S1	S2	S4	Mean
N1	1.06	1.22	1.37	1.05	1.18
N2	1.25	1.86	2.09	2.14	1.84
N3	0.79	2.00	2.08	2.11	1.75
Mean	1.03	1.69	1.85	1.77	1.59

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

NITROGEN	SULPHUR	NITROGEN SULPHUR
0.169	0.195	0.338

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	33	0.478	30.1

GRAIN MEAN DM% 87.0

PLOT AREA HARVESTED 0.00176