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97/W/CS/474 Efficiency of S Fertilizers - W. Wheat

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97/W/CS/474

EFFICIENCY OF S FERTILIZERS

Object: To measure the effect of different forms of sulphur on the yield of winter wheat and the following oilseed rape crop - Woburn, Lansome III.

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

The first year, w. wheat.

Design: 4 randomised blocks of 4 x 2 + 1.

Plot dimensions: 8.0 x 12.0.

Treatments: All combinations of:-

- | | |
|----------------|---|
| 1. FORM | Form of sulphur to provide 30 kg S: |
| T+A | 50% Stefes Tiger 90 and 50% ammonium sulphate |
| AS | Ammonium sulphate |
| T90 | Stefes Tiger 90 |
| NAS | Sodium thiosulphonate |

2. **TIMING**

- | | |
|-----|------------------------|
| SB | To seedbed, pre-sowing |
| MAR | In March |

EXTRA

- | | |
|---|------|
| - | None |
|---|------|

NOTE: The nitrogen was balanced on all plots to match that supplied by the ammonium sulphate treatment, this was 26.25 kg N to the seedbed and a spring dressing to provide a total of 180 kg N.

Experimental diary:

- 23-Sep-96 : B : Ploughed.
24-Sep-96 : B : Rolled.
07-Oct-96 : T : All plots except **FORM** AS, **TIMING** SB: Balancing nitrogen applied as 27.5% N.
08-Oct-96 : T : **FORM** T+A, AS, T90, NAS, **TIMING** SB: Seedbed sulphur treatments applied.
 : B : Rotary harrowed, Riband, dressed Sibutol, drilled at 325 seeds per m².
11-Dec-96 : B : Stomp 400 SC at 2.5 l with Isoproturon 500 at 1.0 l in 200 l.
12-Mar-97 : T : **FORM** T+A, AS, T90, NAS, **TIMING** MAR: Sulphur treatments applied.
14-Mar-97 : T : All plots: Balanced spring nitrogen applied as 27.5% N.
23-May-97 : B : Halo at 2.0 l in 300 l.
14-Aug-97 : B : Combine harvested.

Previous crops: W. Barley and potatoes 1995, s. rape 1996.

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GRAIN TONNES/HECTARE

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

TIMING FORM	SB	MAR	Mean
T+A	6.19	7.05	6.62
AS	6.62	7.19	6.90
T90	8.10	6.30	7.20
NAS	6.56	6.55	6.56
Mean	6.87	6.77	6.82

EXTRA 7.27

Grand mean 6.87

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

FORM	TIMING	FORM TIMING & EXTRA
0.845	0.597	1.195

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	24	1.690	24.6
GRAIN MEAN DM%	87.6		
PLOT AREA HARVESTED	0.00220		