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Numerical Results of the Field Experiments 1970

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70/W/CS/15 Direct Seeding - W. Wheat

Rothamsted Research

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DIRECT SEEDING

(70/W/CS/15)

Direct seeding, Woburn White Horse Field 1970, the fifth year -
Winter wheat.

Design: 4 randomised blocks of 4 plots, split into 2.

Area of each sub plot: 0.0149. Area harvested: 0.0071.

Treatments: All combinations of:-

- Whole plots: 1. Seedbed preparations: Direct seeding after paraquat at 1.0 lb ion in 33 gals (SP), normal cultivations (M).
2. Seed dressing: No insecticide, fungicide only (SO), combined insecticide fungicide (SI).
Sub plots: 3. Insecticide: None (DO), phorate at 10 lb a.i. applied in autumn (DD).

NOTE: Treatments 1966 - 1970 inclusive are cumulative.

Basal applications: 530 lb (0:14:28) combine drilled. 1.0 cwt N as 'Nitro-Chalk' top dressed. Weedkiller: Aminotriazole at 2.0 lb plus ammonium thiocyanate at 1.85 lb in 37 gals. Ioxynil at 7.5 oz plus mecoprop at 22.5 oz in 25 gals.

Cultivations, etc.: Aminotriazole and ammonium thiocyanate applied: 2 Sept, 1969. M plots ploughed: 3 Oct. SP plots paraquat applied: 6 Oct. Insecticide applied, seed combine drilled at 190 lb: 21 Oct. 'Nitro-Chalk' applied: 28 Apr, 1970. Ioxynil and mecoprop applied: 7 May. Combine harvested: 13 Aug.

- NOTES: (1) For the previous years' results see 'Results' 66/C/33, 67/C/26, 68/C/20 and 69/W/CS/15.
(2) A germination count was made in March, and plant samples were taken then and in July for counts of damage to tillers. Counts of soil fauna were made in March and after harvest when earthworm counts were also made.
(3) Observations were made on the apparent effects of phorate on weeds.
(4) Samples were taken for estimates of take-all (*Ophiobolus graminis*).
(5) Samples were taken for nematode counts in October, January, May and August.

Standard errors per plot:

Grain, cwt: Whole plot: 1.54 or 13.2% (9 d.f.)
Sub plot: 3.54 or 30.0% (12 d.f.)

70/W/CS/15

SUMMARY OF RESULTS

GRAIN: CWT

| | SO | SI | DO | DD | Mean |
|--------------|---------|------|-------------|------|---------|
| | (±0.77) | | (1) and (2) | | (±0.54) |
| SP | 10.3 | 11.3 | 13.0 | 8.6 | 10.8 |
| M | 12.7 | 12.3 | 13.6 | 11.5 | 12.5 |
| | | | (1) and (2) | | (±0.54) |
| | | SO | 13.8 | 9.2 | 11.5 |
| | | SI | 12.8 | 10.9 | 11.8 |
| Mean (±0.88) | | | 13.3 | 10.1 | 11.7 |

Mean D.M. %: 81.2

- (1) (±1.04) For use in vertical and diagonal comparisons only
- (2) (±1.25) For use in horizontal and interaction comparisons only