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Yields of the Field Experiments 1975

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75/ R/CS/135 - Direct Drilling & Diseases - Winter Barley

Rothamsted Research

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75/R/CS/135

DIRECT DRILLING AND DISEASES

Object: To study the effects of direct drilling on pathogens and yield of winter barley - Meadow.

Sponsor: R.D. Prew.

The second year, winter barley.

For previous year see 74/R/CS/135.

Design: 2 randomised blocks of 3 plots.

Whole plot dimensions: 26.7 x 30.5.

| | |
|--|----------|
| Treatments: Cultivations:- | CULTIVIN |
| Ploughed, spring-tine cultivated, drilled (P) | PLOUGH |
| Paraquat to stubble, chisel ploughed, rotary harrowed, drilled (C) | CHISEL |
| Paraquat to stubble, direct drilled (D) | DIRECT |

NOTE: Paraquat was applied at 0.84 kg ion in 220 l.

Basal applications: Manures: (10:24:24) at 250 kg combine drilled. 'Nitro-Chalk' in spring at 375 kg. Weedkiller: Dicamba with mecoprop and MCPA ('Banlene Plus' at 5.6 l in 220 l).

Seed: Maris Otter seed dressed fungicide only, sown at 160 kg (P & C), 190 kg (D).

Cultivations, etc.:- Paraquat applied to C and D plots: 14 Oct, 1974.
P plots ploughed: 15 Oct. C plots chisel ploughed: 17 Oct. D plots direct drilled: 24 Oct. P plots spring-tine cultivated, C plots rotary harrowed and seed sown on P and C plots: 25 Oct. N applied: 21 Apr, 1975. Weedkiller applied: 12 May. Combine harvested: 30 July. Previous crops: Barley 1973 and 1974.

NOTES: (1) Much straw trash was left on the surface before drilling, to aid study of foliar diseases. Because of this the crop established badly on D plots and became infested with grass weeds.
(2) Root and foliar diseases were assessed.

75/R/CS/135

*** TABLES OF MEANS ***

GRAIN TONNES/HECTARE

| CULTIVTN | PLOUGH | CHISEL | DIRECT | MEAN |
|----------|--------|--------|--------|------|
| | 4.01 | 4.38 | 3.08 | 3.83 |

GRAIN MEAN DM% 87.5

PLOT AREA HARVESTED 0.00929