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Yields of the Field Experiments 1971

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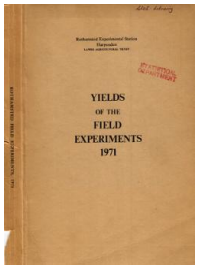

71/W/CS/15 Direct Seeding - Wheat

Rothamsted Research

Rothamsted Research (1972) *71/W/CS/15 Direct Seeding - Wheat ;* Yields Of The Field Experiments 1971, pp 150 - 151 **- DOI: https://doi.org/10.23637/ERADOC-1-97**

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71/W/CS/15

DIRECT SEEDING

Object: To study the effects of direct seeding on yields of wheat, grown continuously for six years, and on populations of soil animals - Woburn White Horse Field.

The sixth year, winter wheat.

For previous years see 66/C/33(t), 67/C/26(t), 68/C/20(t) and 69-70/W/CS/15(t).

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

Whole plot dimensions: 6.40 x 19.8. Sub plot area harvested: 0.00288.

Treatments: All combinations of:-

Whole plots: 1. Seedbed preparations: Direct seeding after paraquat at 1.12 kg ion in 281 l followed by 1.68 kg ion in 337 l (SP), normal cultivations (M).

2. Seed dressing: No insecticide, fungicide only (SO), combined insecticide fungicide (SI).

Sub plots: 3. Insecticide: None (DO), phorate granules at 11 kg a.i. applied in autumn (DD).

NOTE: Treatments 1966-1971 inclusive are cumulative.

Basal applications: 635 kg (0:14:28) combine drilled. 592 kg 'Nitro-Chalk' top dressed. Weedkillers: 2,4-D at 0.56 kg plus dichlorprop at 2.24 kg in 281 l.

Cultivations, etc.: M plots ploughed: 7 Sept, 1970. Paraquat applied to SP plots: 16 Sept and 7 Oct. Phorate applied, seed combine drilled at 213 kg: 8 Oct. 2,4-D plus dichlorprop applied: 31 Mar, 1971. N applied: 14 Apr. Combine harvested: 27 Aug. Variety: Cappelle.

NOTES: (1) Plant samples were taken in March and July for counts of damage to tillers. Counts of soil fauna were made at monthly intervals and counts of earthworms before and after harvest.

(2) Samples were taken for estimates of take-all (Ophiobolus graminis).

Standard errors per plot.

Grain, tonnes/hectare: Whole plot: 0.589 or 16.1% (9 d.f.)
Sub plot: 0.614 or 16.8% (12 d.f.)

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71/W/CS/15

SUMMARY OF RESULTS

GRAIN: TONNES/HECTARE

	SO	SI	DO	DD	Mean
	(±0.295)		(1) and (2)		(±0.208)
SP	3.39	3.80	3.72	3.47	3.59
M	3.57	3.90	4.12	3.35	3.74
			(1) and (2)		(±0.208)
		SO	3.96	3.01	3.48
		SI	3.89	3.81	3.85
Mean (±0.153)			3.92	3.41	3.67

Mean D.M. %: 81.8

(1) (±0.259) For use in vertical and diagonal comparisons only
(2) (±0.217) For use in horizontal and interaction comparisons only

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