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Numerical Results of the Field Experiments 1968

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68/C/11 Effects of Crop Sequences and Green Manures - Legumes, Barley

Rothamsted Research

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68/c/11.1

LEGUMES AND BARLEY

(CH)

Effects of crop sequences and green manures - Highfield IV 1968,
the second year - barley.

Design: 2 randomised blocks of 12 plots, split into 4.

Area of each sub plot: 0.0121. Area harvested: 0.0064.

Treatments: All combinations of:-

Whole plots:

1. Crop sequences (C):

	1	2	3	4	5	6	7
1967	B	B	O	O	Ra	Cl	Be
Undersown	-	T	-	T	-	-	-
1968	B	B	B	B	B	B	B

With nitrogen in 1967: 0.4 (N1), 0.8 (N2) cwt N as 'Nitro-Chalk' to oats and barley, 0.8 (N2), 1.6 (N4) to oilseed rape, none to beans and clover (NO).

Sub plots:

2. Nitrogen to barley 1968: None (T0), 0.35 (T1), 0.70 (T2),
1.05 (T3) cwt N as 'Nitro-Chalk'.

B = Barley, O = Oats, Ra = Oilseed rape, Cl = Red Clover, Be = Spring beans, T = Trefoil.

Basal applications: 2.5 cwt (0:20:20) combined drilled. Weedkiller: Mecoprop at 36 oz and 2,4-D at 9 oz in 32 gals.

Cultivations, etc.: - Corrective K applied to clover plots at 1.0 cwt K2O as muriate of potash: 22 Nov, 1967. Ploughed: 4 Dec. Seed drilled at 140 lb: 28 Feb, 1968. 'Nitro-Chalk' applied: 15 Mar. Weedkiller applied: 17 May. Combine harvested: 22 Aug. Variety: Maris Badger.

NOTE: (1) Samples were taken on 5 July for estimation of take-all (*Ophiobolus graminis*) and eyespot (*Cercospora herpotrichoides*).

(2) For previous year's results see 'Results' 67/c/27.

Standard errors per plot.

Grain: Whole plot: 1.16 or 3.7% (11 d.f.)

Sub plot: 2.99 or 9.6% (36 d.f.)

68/c/11.2

SUMMARY OF RESULTS

GRAIN

Crop	1967 Under- sown	N	1968				Mean
			N0	N1	N2	N3	
			(1) and (2)				(± 0.82)
B	-	1	16.6	28.4	34.7	29.6	27.3
B	-	2	18.8	30.0	35.6	33.5	29.5
B	T	1	33.0	35.4	30.7	27.8	31.7
B	T	2	32.2	35.2	33.1	32.5	33.3
O	-	1	25.0	32.9	34.4	30.1	30.6
O	-	2	23.4	35.2	35.8	29.6	31.0
O	T	1	31.1	36.7	32.3	29.1	32.3
O	T	2	28.4	36.1	30.5	28.7	30.9
Ra	-	2	23.9	36.1	35.8	30.5	31.6
Ra	-	4	29.7	38.6	33.8	27.8	32.5
Cl	-		37.2	29.4	29.2	28.1	30.9
Be	-		28.1	37.0	33.3	29.5	32.0
Mean (± 0.61)			27.3	34.2	33.3	29.7	31.1

(1) (± 2.01) For use in vertical and diagonal comparisons only(2) (± 2.12) For use in horizontal and interaction comparisons only

Mean D.M. %: 86.6