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Numerical Results of the Field Experiments 1970

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70/R/CS/24 P, K and Take-all - Barley

Rothamsted Research

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P, K AND TAKE-ALL

(70/R/CS/24)

P, K and take-all (*Ophiobolus graminis*), West Barnfield II 1970, the third year, barley. For treatments etc. and for the previous years' results see 'Results' 68/C/16 and 69/R/CS/24.

Design: 2 replicates of 5x2x4 in 4 blocks of 10 plots split into 2 for N.

Area of each sub plot: 0.0127. Area harvested: 0.0067.

N test: A test of 0.3 (N1), 0.6 (N2), 0.9 (N3), 1.2 (N4) cwt N as 'Nitro-Chalk' is now applied to half plots. The test is cumulative in successive years.

Basal applications: Manures: None. Weedkiller: 2,4-D at 0.5 lb and dichlorprop at 2 lb in 20 gals.

Cultivations, etc.: Ploughed: 29 Sept, 1969. N, P and K applied: 25 Mar, 1970. Seed drilled at 140 lb: 31 Mar. Weedkiller applied: 18 May. Combine harvested: 15 Aug. Variety: Julia.

NOTE: Estimates of eyespot (*Cercospora herpotrichoides*) and take-all (*Ophiobolus graminis*) were made in early July.

Standard errors per plot.

Grain, cwt: Whole plot: 1.91 or 5.7% (17 d.f.)

Sub plot: 2.21 or 6.6% (20 d.f.)

Pooled (used for calculation of standard errors in summary): 2.45 or 7.3% (37 d.f.)

70/R/CS/24

SUMMARY OF RESULTS

GRAIN: CWT

	P0	P1	P4	P6*	P24*	Mean
			(±0.86)			(±0.39)
K1	24.4	33.0	38.0	31.7	37.7	33.0
K4	24.5	31.3	38.6	34.2	40.3	33.8
			(±1.22)			(±0.55)
N1	24.4	30.8	35.4	32.0	36.6	31.8
N2	23.0	32.3	40.2	31.9	39.7	33.4
N3	26.3	33.6	39.6	34.0	40.2	34.7
N4	24.2	32.2	37.9	33.9	39.5	33.5
Mean (±0.61)	24.5	32.2	38.3	33.0	39.0	33.4
	N1	N2	N3	N4		
			(±0.77)			
K1	31.9	33.2	33.9	33.0		
K4	31.8	33.7	35.6	34.0		

* Applied 1968 only

Mean D.M. %: 86.1

70/R/CS/24

GRAIN: CWT

	K1					K4				
	P0	P1	P4	P6	P24	P0	P1	P4	P6	P24
	(±1.73)									
N1	24.2	31.5	34.4	31.9	37.4	24.5	30.1	36.4	32.1	35.8
N2	25.1	32.9	40.5	30.1	37.2	20.9	31.6	39.9	33.7	42.3
N3	22.7	34.1	38.9	33.4	40.2	29.8	33.0	40.2	34.7	40.1
N4	25.6	33.8	38.1	31.5	36.1	22.7	30.6	37.7	36.3	42.8

70/R/CS/24

STRAW: CWT

	P0	P1	P4	P6*	P24*	Mean
K1	9.2	11.7	14.8	11.8	13.9	12.3
K4	10.8	13.5	17.9	14.4	17.3	14.8
N1	9.4	11.4	12.7	12.0	13.7	11.8
N2	8.9	13.1	17.8	13.1	15.7	13.7
N3	11.5	14.1	16.7	13.1	15.9	14.3
N4	10.1	11.9	18.2	14.4	16.9	14.3
Mean	10.0	12.6	16.3	13.1	15.6	13.5

	N1	N2	N3	N4
K1	11.3	12.4	13.1	12.3
K4	12.3	15.1	15.4	16.3

* Applied 1968 only

Mean D.M. %: 88.8

70/R/CS/24

STRAW: CWT

	K1					K4				
	P0	P1	P4	P6	P24	P0	P1	P4	P6	P24
N1	9.8	11.3	11.2	11.2	13.0	8.9	11.4	14.2	12.7	14.4
N2	9.1	12.1	15.9	10.8	14.0	8.7	14.2	19.7	15.3	17.4
N3	8.9	12.7	16.2	12.4	15.1	14.2	15.4	17.2	13.7	16.7
N4	8.9	10.7	15.7	12.8	13.3	11.3	13.1	20.6	16.0	20.6