ROTHAMSTED RESEARCH

Numerical Results of the Field Experiments 1969

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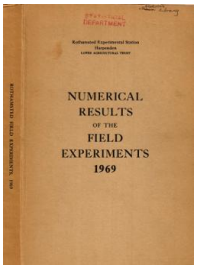

69/W/CS/17 - Cereal Cyst Nematode - Barley

Rothamsted Research

Rothamsted Research (1970) *69/W/CS/17 - Cereal Cyst Nematode - Barley ;* Numerical Results Of The Field Experiments 1969, pp 160 - 163 **- DOI: https://doi.org/10.23637/ERADOC-1-96**

CEREAL CYST-NEMATODE

(69/W/CS/17)

The effect of cereal cyst-nematode (Heterodera avenae) on the yield of resistant barley - Butt Close 1969, fourth year. For treatments, previous years' results etc., see 'Results' 67/C/41 and 68/C/36.

Design: 6 blocks of 5 plots split into 3.

Area of each sub plot: 0.0031. Area harvested: 0.0020.

Treatments: All combinations of:-

Blocks: 1. Crop in 1968: Spring wheat, spring barley in three pairs of blocks.

Whole plots: 2. Oats 1966: Under oats till harvest (O), oats rotary cultivated 26 May, and then bare fallowed (A), oats rotary cultivated 26 May, bare fallowed, injected with D-D at 400 lb, 19 Dec, 1966 (B).

Sub plots: 3. Cumulative nitrogen to wheat 1967, 1968: 0.6 (N1), 1.2 (N2), 1.8 (N3) cwt N as 'Nitro-Chalk'.

or

Cumulative nitrogen to barley 1967, 1968: 0.4 (N1), 0.8 (N2), 1.2 (N3) cwt N as 'Nitro-Chalk'.

NOTE: In 1968 because of a severe invasion of grain aphid Sitobion avenae a test of O v. 0.4 lb dimethoate (S) in 30 gals was made on spring wheat, two of the three O plots in each block and the A and B plots were sprayed.

Basal applications: 350 lb (20:10:10) combine drilled. Weedkiller: Ioxynil at 7.5 oz and mecoprop at 22.5 oz in 25 gals.

Cultivations, etc.:- Ploughed: 3 Feb, 1969. Seed combine drilled at 154 lbs: 26 Mar. Weedkiller applied: 14 May. Combine harvested: 7 Aug. Variety: Resistant Barley.

NOTES: 1. Plant samples were taken for nematode cyst counts on roots 2 June.

2. Soil samples were taken for nematode counts after harvest.

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Standard errors per plot. Grain, cwt:		
After Spring wheat:	Whole plot:	1.52 or 4.1% (8 d.f.)
	Sub plot:	3.31 or 9.0% (20 d.f.)
After Barley:	Whole plot:	1.86 or 5.6% (8 d.f.)
	Sub plot:	4.32 or 12.9% (20 d.f.)
Pooled*	Whole plot:	1.70 or 4.8% (16 d.f.)
	Sub plot:	3.85 or 11.0% (40 d.f.)

* Used in calculation of SE's of means in Summary.

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SUMMARY OF RESULTS

BARLEY, GRAIN

AFTER SPRING WHEAT

	OS	O	AS	BS	Mean
	(1) & (2)		(3) & (4)		(±0.99)
N1	35.8	37.6	37.5	41.7	37.7
N2	33.4	35.2	36.2	37.3	35.1
N3	36.4	36.9	36.5	40.6	37.4
Mean (±0.98)	35.2 (±0.69)	36.5	36.7	39.9	36.7

(1) (±1.46) (3) (±2.06) For use in horizontal and diagonal comparisons only.

(2) (±1.57) (4) (±2.22) For use in vertical and interaction comparisons only.

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BARLEY, GRAIN

AFTER BARLEY

	0	A	B	Mean
	(1) & (2)	(3) & (4)		(±0.99)
N1	31.0	35.3	39.0	33.5
N2	33.8	32.9	33.5	33.5
N3	31.7	29.9	41.4	33.3
Mean (±0.98)	32.2 (±0.69)	32.7	37.9	33.4

(1) (±1.46) (3) (±2.06) For use in horizontal and diagonal comparisons only.

(2) (±1.57) (4) (±2.22) For use in vertical and interaction comparisons only.

Pooled mean: 35.1
Pooled mean D.M.%: 85.8

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