

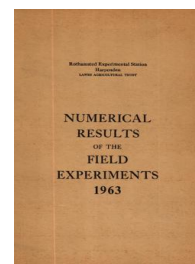
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63/R/AO/C/8 Decline of Take-all - Winter Wheat

Rothamsted Research

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63/c/8.1

DECLINE OF TAKE-ALL

(AO)

The effect of crop sequences on the decline of take-all (Ophiobolus graminis) - Great Field I 1963, the first year.

Design: 3 randomised blocks of 6 plots each (5 of winter wheat, 1 of oats), using the plots of Series III of the Cereals and Beans Rotations Experiment (see 'Numerical Results of the Field Experiments' 61/c/1).

Area of each plot: 0.0305 acres. Area harvested: 0.0200 acres.

Treatments: Crop sequences:-

	1959	1960	1961	1962	1963	1964	1965	1966
1	W	W	WS	W	W	W	W	W
2	W	O	Be	W	W	W	W	W
3	WS	W	WS	W	O	W	W	W
4	B	W	B	W	W	W	O	W
5	W	O	WS	W	W	W	W	W
6	O	W	WS	W	W	O	W	W

O = Oats, Be = Spring beans, WS = Spring wheat, W = Winter wheat, B = Barley.

Basal dressings per acre: 2.5 cwt compound fertiliser (20% P₂O₅, 20% K₂O) combine drilled. 1.0 cwt N to wheat and 0.4 cwt N to oats applied in spring as 'Nitro-Chalk'.

Cultivations, etc.: Ploughed: Oct 29, 1962. Winter wheat drilled at 2.5 bushels per acre: Nov 14. 'Nitro-Chalk' applied to winter wheat: Mar 25, 1963. Oats drilled at 4 bushels per acre, 'Nitro-Chalk' applied to oats: Apr 9. Winter wheat sprayed with mecoprop/2,4-D at 7 pints in 40 gallons per acre: May 16. Oats sprayed with MCPA/dichlorprop at 3.2 pints in 40 gallons per acre: May 27. Combine harvested: Sept 10. Varieties: winter wheat - Cappelle, oats - Condor.

Notes: (1) Yields were only taken for winter wheat.
(2) Estimates were made on 5 occasions of the incidence of take-all on wheat.

Standard error per plot. Winter wheat.
Grain (at 85% dry matter): 1.91 cwt per acre or 7.3% (8 d.f.)

63/c/8.2

Summary of Results

Grain (at 85% dry matter): cwt per acre

Crop in	W	O	W	B	W	Mean
1959	W	W	O	W	O	
1960	WS	WS	WS	B	Be	
1961	W	W	W	W	W	
1962						
	28.1	27.0	24.4	25.9	25.5	26.2
			(±1.10)			

Mean dry matter % as harvested: 81.4