

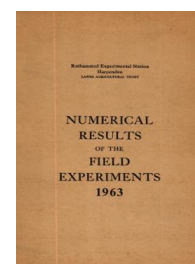
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Yields of the Field Experiments 1963

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63/R/AQ/C/10 Cereal Disease Reference Plots - Wheat

Rothamsted Research

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63/c/10.1

CEREAL DISEASE REFERENCE PLOTS

(AQ)

The effect of crop sequences on the incidence of cereal diseases - Pennell's Piece 1963, the first year.

Crops in 1963: Winter wheat, spring wheat, beans and oats.

Design: 4 randomised blocks of 4 plots each, 2 blocks for winter and 2 for spring wheat. In addition 1 plot per block was sown with oats and 1 with beans.

Area of each plot: 0.0180 acres. Area harvested: 0.0119 acres.

Treatments: Crop sequences:-

	1963	1964	1965	1966	1967
1	W	W	W	Be	O
2	W	W	Be	O	W
3	W	Be	O	W	W
4	Be	O	W	W	W
5	O	W	W	W	Be
6	W	W	W	W	W

W = Winter wheat (plots 1 - 12) and Spring wheat (plots 13 - 24),
O = Oats, Be = Spring beans.

Basal dressings (cwt per acre):

N as 'Nitro-Chalk':- 1.0 N to winter wheat as spring top dressing.
0.6 N to spring wheat in seedbed.
0.4 N to oats in seedbed.

None to spring beans.

PK as compound fertiliser (14% $P_{2}O_{5}$, 28% $K_{2}O$):-

0.5 $P_{2}O_{5}$, 1.0 $K_{2}O$ to spring beans placement drilled.

0.3 $P_{2}O_{5}$, 0.6 $K_{2}O$ to all other crops combine drilled.

Cultivations, etc.: Ploughed: Oct 18 - 26, 1962. Winter wheat:-

Seed drilled at 2.5 bushels per acre: Oct 31, 1962. 'Nitro-Chalk'

applied: Mar 13, 1963. Sprayed with mecoprop/2,4-D at 7 pints in

40 gallons per acre: May 16. Combine harvested: Sept 10. Variety:

Cappelle.

63/c/10.2

Spring wheat: Seed drilled at 3 bushels per acre: Apr 11, 1963.

'Nitro-Chalk' applied: Apr 18. Sprayed with methoxychlorobenzoic acid/MCPA (MBA/MCPA) at 4 pints in 40 gallons per acre: June 6.
Combine harvested: Sept 12. Variety: Jufy I.

Oats: Seed drilled at 4 bushels per acre: Apr 9, 1963. 'Nitro-Chalk' applied: Apr 18. Sprayed with methoxychlorobenzoic acid/MCPA (MBA/MCPA) at 4 pints in 40 gallons per acre: June 6.
Combine harvested: Sept 9. Variety: Condor.

Spring beans: Seed drilled at 200 lb per acre: Apr 9, 1963. Sprayed with demeton-methyl at 6 fluid oz in 40 gallons per acre: June 14.
Combine harvested: Oct 3. Variety: Tick 30B.

Previous crops: Sugar beet 1961, spring wheat 1962.

Note: (1) Yields were only taken for winter and spring wheat.
(2) Estimates of the incidence of take-all (*Ophiobolus graminis*), eyespot (*Cercospora herpotrichoides*) and sharp eyespot (*Corticium solani*) were made on 4 occasions for winter and 2 for spring wheat.

Standard errors per plot. Grain (at 85% dry matter):
Winter wheat: 7.72 cwt per acre or 24.2% (6 d.f.)
Spring wheat: 2.80 cwt per acre or 8.7% (6 d.f.)

Summary of Results

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

Winter wheat	Spring wheat
31.9	32.3
(±2.73)	(±0.99)

Mean dry matter % as harvested: Winter wheat 78.6
Spring wheat 73.1