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74/R/RN/9 Cereal Disease Reference Plots - Beans, Oats, Wheat

74/R/RN/9 Cereal Disease Reference Plots - Beans, Oats, Wheat, Rothamsted Research (1975) Yields Of The Field Experiments 1974, pp 104 - 105 - DOI: <https://doi.org/10.23637/ERADOC-1-119>

74/R/RN/9

CEREAL DISEASE REFERENCE PLOTS

Object: To study the effects of intensive cereal cropping on the incidence of soil-borne diseases, especially in relation to seasonal variation - Pennell's Piece.

Sponsors: D.B. Slope, E.W. Broom, G.A. Salt.

The twelfth year, winter wheat, spring oats, beans.

For previous years see 63/C/10(t), 64-65/C/9, 66/C/7, 67-68/C/5 and 69-73/R/RN/9.

Design: 2 randomised blocks of 6 plots.

Whole plot dimensions: 17.1 x 4.27. Area harvested: 0.00479.

Treatments: Previous crops (1963-73):- PREVCROP

1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	
O	W	W	W	BE	O	W	W	W	BE	O	W/W/BE/O
W	W	W	BE	O	W	W	W	BE	O	W	W/BE/O/W
W	W	BE	O	W	W	W	BE	O	W	W	BE/O/W/W
W	BE	O	W	W	W	BE	O	W	W	W	-
BE	O	W	W	W	BE	O	W	W	W	BE	-
W	W	W	W	W	W	W	W	W	W	W	W/W/W/W

where: W = wheat, BE = beans, O = oats

Standard applications:

Winter wheat: Manures: (0:14:28) at 270 kg, combine drilled, 'Nitro-Chalk' at 500 kg. Weedkillers: Chlortoluron ('Dicurane 80 WP' at 4.5 kg in 220 l), dicamba with mecoprop and MCPA ('Banlene Plus' at 5.6 l in 370 l).

Spring beans: Manures: (0:14:28) at 450 kg, placement drilled. Insecticide: Demeton-s-methyl at 0.25 kg in 220 l.

Spring oats: Manures: (0:14:28) at 270 kg, combine drilled, 'Nitro-Chalk' at 200 kg. Weedkiller: Dicamba with mecoprop and MCPA ('Tetralex Plus' at 7.0 l in 220 l).

Seed: Winter wheat: Cappelle, sown at 200 kg.

Spring beans: Minor, sown at 220 kg.

Spring oats: Manod, sown at 190 kg.

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Cultivations, etc.:— All plots: Ploughed: 17 Sept, 1973.
 Winter wheat: Power harrowed, seed sown: 15 Oct. 'Dicurane'
 applied: 22 Oct. N applied: 22 Mar, 1974. 'Banlene Plus'
 applied: 6 May. Combine harvested: 27 Aug.
 Spring beans: Power harrowed: 27 Mar, 1974. Seed sown and spring-
 tine cultivated: 27 Mar. Insecticide applied: 13 June. Combine
 harvested: 14 Oct.
 Spring oats: Power harrowed: 27 Mar, 1974. Seed sown: 28 Mar.
 N applied: 8 Apr. Weedkiller applied: 28 May. Combine harvested:
 27 Aug.

NOTES: (1) Yields were taken for winter wheat only.
 (2) Estimates were made in July of incidence of take-all
 (*Gaeumannomyces graminis*) and eyespot (*Cercospora herpotrichoides*) in the wheat.

TABLES OF MEANS

WINTER WHEAT

GRAIN: TONNES/HECTARE

PREVCROP				Mean
W/W/BE/O	W/BE/O/W	BE/O/W/W	W/W/W/W	
6.28	5.70	5.79	5.67	5.86

Mean D.M.% 83.6