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Yields of the Field Experiments 1978

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78/R/CS/212 Seasonal Effects of Take-all - Beans, Wheat

Rothamsted Research

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78/R/CS/212

SEASONAL EFFECTS OF TAKE-ALL

Object: To study the incidence of take-all (*Gaeumannomyces graminis*) in continuous wheat and in first and second wheats after a break - Great Harpenden I.

Sponsor: D. Hornby.

The first year, beans, wheat.

Design: 3 randomised blocks of 4 plots.

Whole plot dimensions: 5.33 x 31.39.

Treatments:

CRP SEQ	Crop sequences:					
	1978	1979	1980	1981	1982	1983
1	W	W	W	W	W	W
2	W	BE	W	W	BE	W
3	W	W	BE	W	W	BE
4	BE	W	W	BE	W	W

BE = spring beans, W = wheat

NOTE: (1) Yields are recorded from wheat only.

(2) In this, the first year, yields were recorded from the separate sequences although they do not yet differ in treatment.

Standard applications:-

Wheat: Manures: (0:20:20) at 310 kg. 'Nitra-shell 34' at 260 kg. Weedkillers: Mecoprop, bromoxynil and ioxynil ('Brittox' at 3.5 kg) in 220 l.

Beans: Insecticide: Pirimicarb at 0.14 kg in 220 l.

Seed: Wheat: Flanders, sown at 190 kg.

Beans: Minden, sown at 200 kg.

Cultivations, etc.:-

All plots: Chisel ploughed: 23 Aug, 1977. Heavy spring-tine cultivated: 21 Oct. Spring-tine cultivated: 24 Oct.

Wheat: Seed sown: 24 Oct. N applied: 8 May, 1978. Weedkillers applied: 11 May. Combine harvested: 13 Sept.

Beans: Rotary harrowed, seed sown: 8 Apr, 1978. Tractor hoed twice: 19 May, 8 June. Insecticide applied: 7 July. Combine harvested: 25 Sept.

Previous crops: W. Oats, 1976, Potatoes 1977.

NOTE: Soil and plant samples were taken throughout the season. An additional soil sample was taken after harvest. Samples were assessed for take-all.

78/R/CS/212

WINTER WHEAT

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

CRP SEQ	1	2	3	MEAN
	7.05	6.56	6.58	6.73

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	CRP SEQ
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SED	0.184

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	4	0.226	3.4

GRAIN MEAN DM% 84.5

PLOT AREA HARVESTED 0.00434