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# Yields of the Field Experiments 1988



Full Table of Content

# 88/R/CS/212 Seasonal Effects of Take-all - W. Wheat, S. Beans

### **Rothamsted Research**

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#### 88/R/CS/212

#### SEASONAL EFFECTS OF TAKE-ALL

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

Sponsors: D. Hornby, R.J. Gutteridge.

The 11th year, s. beans, w. wheat.

For previous years see 78-87/R/CS/212.

Design: 3 randomised blocks of 8 plots.

Whole plot dimensions:  $5.33 \times 10.7$ .

#### Treatments:

PREVCROP		Prev	Previous		crops before w.		wheat	1988:			
		78	79	80	81	82	83	84	85	86	87
W8	W W	W	W	W	W	W	W	W	W	W	W
Wl	W BE	BE	W	W	BE	W	W	BE	W	W	BE
BE	BE W	W	BE	W	W	BE	W	W	BE	BE	W
W2	BE W	W	W	BE	W	W	BE	W	W	BE	W
W8	BE W	W	W	W	W	W	W	W	W	BE	W
W1	W W	BE	W	W	BE	W	W	BE	W	W	W
W2	W W	W	W	BE	W	W	BE	W	W	W	W

BE = s. beans, W = w. wheat

NOTE: One additional crop sequence was in s. beans 1988, yields not taken.

#### Standard applications:

- W. wheat: Manures: 'Nitram' at 410 kg. Weedkillers: Chlortoluron at 3.5 kg in 200 l. Fluroxypyr at 0.20 kg with isoproturon at 2.1 kg in 200 l.
- Seed: W. wheat: Avalon, sown at 180 kg.
  S. beans: Minden, sown at 200 kg.

## Cultivations, etc.:-

Both crops: Ploughed: 24 Sept, 1987. Rotary harrowed: 5 Oct.

- W. wheat: Seed sown: 5 Oct, 1987. Chlortoluron applied: 6 Nov. N applied: 14 Apr, 1988. Fluroxypyr and isoproturon applied: 26 Apr. Combine harvested: 23 Aug.
- S. beans: Heavy spring-tine cultivated, rotary harrowed, seed sown: 11 Mar, 1988.

NOTE: Plant and soil samples were taken frequently during the season for assessment of take-all.

#### 88/R/CS/212

#### GRAIN TONNES/HECTARE

\*\*\*\*\* Tables of means \*\*\*\*\*

#### PREVCROP

W8 W W 6.21
W1 W BE 6.61
BE BE W 7.43
W2 BE W 7.07
W8 BE W 7.07
W1 W W 6.79
W2 W W 6.82

Mean 6.86

\*\*\* Standard errors of differences of means \*\*\*

#### PREVCROP

0.438

\*\*\*\*\* Stratum standard errors and coefficients of variation \*\*\*\*

 Stratum
 d.f.
 s.e.
 cv%

 BLOCK.WP
 12
 0.537
 7.8

GRAIN MEAN DM% 82.5

PLOT AREA HARVESTED 0.00291