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Yields of the Field Experiments 1985



Full Table of Content

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

Rothamsted Research

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85/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 and second w. wheats after a break - Great Harpenden I.

Sponsor: D. Hornby.

The eighth year, s. beans, w. wheat.

For previous years see 78-84/R/CS/212.

Design: 3 randomised blocks of 4 plots.

Whole plot dimensions: 5.33 x 31.4.

Treatments:

| PREVCROP | Previous crops before w. wheat 1985: | | | | | | |
|----------|--------------------------------------|------|------|------|------|------|------|
| | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 |
| CONT W | W | W | W | W | W | W | W |
| FIRST W | W | W | BE | W | W | BE | W |
| BEANS | BE | W | W | BE | W | W | BE |

BE = s. beans. W = w. wheat

NOTE: An additional crop sequence was in s. beans 1985, yields not taken.

Standard applications:

W. wheat: Manures: (0:20:20) at 330 kg, combine drilled. 'Nitro-Chalk' (27.5% N) at 330 kg. Weedkillers: Isoproturon at 2.0 kg, bromoxynil at 0.34 kg, clopyralid at 0.07 kg and mecoprop (as 'CMPP' at 4.2 l) with the fungicides in 500 l. Fungicides: Prochloraz at 0.4 kg and carbendazim at 0.15 kg.

Seed: W. wheat: Avalon, sown at 190 kg. S. beans: Minden, sown at 220 kg.

Cultivations, etc.:-

- W. wheat: Ploughed: 8 Oct, 1984. Rotary harrowed, seed sown: 15 Oct. N applied: 12 Apr, 1985. Weedkillers and fungicides applied: 16 Apr. Combine harvested: 29 Aug.
- S. beans: Ploughed: 8 Oct, 1984. Heavy spring-tine cultivated: 19 Mar, 1985. Rotary harrowed, seed sown: 20 Mar. Combine harvested: 27 Sept.

NOTE: Take-all was assessed in soil and in w. wheat roots.

85/R/CS/212

WINTER WHEAT

GRAIN TONNES/HECTARE

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

PREVCROP CONT W FIRST W BEANS MEAN 4.45 4.41 6.08 4.98

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

TABLE PREVCROP

SED 0.335

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

STRATUM DF SE CV%

BLOCK.WP 4 0.410 8.2

GRAIN MEAN DM% 84.7

PLOT AREA HARVESTED 0.00430