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Numerical Results of the Field Experiments 1970

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70/R/CS/58 Crop Sequences and Take-all - S. Wheat, S. Beans, Fallow

Rothamsted Research

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CROP SEQUENCES AND TAKE-ALL

(70/R/CS/58)

Harwoods Piece 1970, the first year, spring wheat, spring beans and fallow.

Design: 3 randomised blocks of 3 plots, split into 4.

Area of each plot: 0.0671. Area harvested (spring wheat only): 0.0107.

Treatments: All combinations of:-

Whole plots: 1. Crops: Spring wheat (WS), spring beans (BE), fallow (F).

Sub plots: 2. Sampling: None two sub-plots per plot (O), sampled two sub-plots per plot (S). 6 samples of 6 in. of row removed on each of eight occasions (May - August).

Basal applications: Weedkiller: Tri-allate at 1.25 lb in 20 gals.

Spring wheat: 390 lb (20:10:10) combine drilled. Weedkiller: 2,4-D at 0.5 lb and dichlorprop at 2 lb in 20 gals.

Spring beans: 370 lb (0:14:28) placement drilled. Weedkiller: Simazine at 1 lb in 40 gals. Insecticide: Phorate at 28 oz in granules.

Cultivations, etc.: Ploughed: 27 Oct, 1969. Tri-allate applied: 19 Apr, 1970.

Spring wheat: Seed combine drilled at 170 lb: 22 Apr, 1970.

2,4-D/dichlorprop applied: 27 Apr. Combine harvested: 29 Aug. Variety: Kolibri.

Spring beans: Seed placement drilled at 200 lb: 20 Apr, 1970.

Simazine applied: 18 May. Phorate applied: 18 June.

Combine harvested: 4 Sept. Variety: Maris Bead.

Previous crops: Spring wheat 1968 and 1969.

NOTE: Soil and crop samples were taken throughout the season and the following observations made:-

Estimates of take-all (*Ophiobolus graminis*) in the soil, in wheat seedlings and in wheat plants.

Growth stages of wheat.

Height of beans at each sampling.

Dry weights of tops and roots of seedlings.

70/R/CS/58

SUMMARY OF RESULTS

SPRING WHEAT

GRAIN: CWT

O	S	Mean
14.5	14.4	14.4

Mean D.M. %: 85.0