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Yields of the Field Experiments 1958

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58/R/CD/1 Cereals and Beans - Rotations

Rothamsted Research

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58/Ca/1.1

CEREALS AND BEANS ROTATIONS

The effect of crop sequences on the incidence of cereal foot and root rot diseases - Great Field I 1958 - the 2nd year.

Design: Three series each of 3 randomized blocks of 6 plots, starting in each of the years 1957, 1958 and 1959.

Area of each plot: 0.0305 acres. Area harvested: 0.0200 acres.

Treatments:

Crop sequences for each series:

1st year:	WW	WW	WW	SW	O	B
2nd year:	WW	O	O	WW	WW	WW
3rd year:	SW	SW	Be	SW	SW	B

WW = Winter wheat, SW = Spring wheat, O = Oats, B = Barley,
Be = Beans.

In the 4th year the plots will be split for N, and all cropped with winter wheat.

Basal dressing: All blocks received 23 cwt per acre ground chalk in Nov 1956; 2 cwt compound fertilizer (16% P₂O₅, 16% K₂O) per acre combine drilled with seed.

Nitrogen for cereals: 3 cwt 'Nitro-Chalk' per acre to spring wheat and 2 cwt 'Nitro-Chalk' per acre to oats and barley, all in seedbed. 6 cwt 'Nitro-Chalk' per acre to winter wheat as spring top dressing, half applied in March and half in May.

Cultivations, etc.: Ploughed: Sept 13, 1957. Winter wheat combine drilled at 2½ bushels per acre: Oct 10. 1st application of 'Nitro-Chalk' to winter wheat: Mar 10, 1958. 'Nitro-Chalk' applied for barley, oats and spring wheat and seed combine drilled at 2, 4 and 3 bushels per acre respectively: Mar 20. 2nd application of 'Nitro-Chalk' to winter wheat: May 12. Sprayed with CMPP at 6 pints in 40 gallons per acre: May 15. Combine harvested: Oats and barley: Sept 1; winter and spring wheat: Sept 3. Varieties: Winter wheat - Heine 7; spring wheat - Koga II; oats - Sun II; barley - Proctor. Previous crop: Series starting in 1958: spring wheat.

Note. Estimates of % area lodged, weed infestation and incidence of Eyespot (*Cercospora herpotrichoides*) and Take-all (*Ophiobolus graminis*), and counts of plant shoot and ear number were made.

For details of the previous year's results etc. see 'Results of the Field Experiments ' 57/Ca/1.

58/Ca/1.2

Summary of Results

Grain (at 85% dry matter): cwt per acre

Series starting in 1957

Crop in 1957 1958	WW WW	SW WW	B WW	O WW	WW O
Mean dry matter % as harvested	18.7	19.5	20.2	19.8*	25.1
		78.5			85.0

Series starting in 1958

Crop in 1958	WW	SW	B	O
Mean dry matter % as harvested	12.3	13.3	29.4	26.7
	75.2	70.2	81.5	85.1

*All three plots were badly damaged by birds.